Gender of nouns denoting higher and lower animals

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Završni rad

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Osijek, 2015.

Summary and key – words

The purpose of this research paper is to provide the analysis of the gender of nouns denoting higher and lower animals in the English language focusing on linguistic and other factors. There are three major parts of this research paper. The first part provides theoretical information about gender and systems of gender assignment in different languages focusing on the animal nouns. The first part also displays a map with the representation of values for each of the systems. The second part elaborates on the aim of my research, as well as on describing the process of how the analysis was organized. This has been done by identifying and analysing the examples of animal nouns that have been found during my research, which is mainly based on the English editions of *National Geographic* (2010-2012). The second part also provides an overview of gender of animals in modern reference grammars and shows what factors play an important role when denoting the gender of animal nouns. The third part provides an insight into corpus analysis and proves the dominance of masculine and feminine genders when referring to animals.

Keywords: gender, systems of gender assignment, gender of animals, lower animals, higher animals

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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).

Since the entire research paper deals with the category of gender, the purpose of the theoretical part is to provide some general information about gender, such as its definition, its brief history in English, and to explain how gender of (animal) nouns is assigned in English and other languages.

The second part focuses on the aim of my research paper and description of the research process. Furthermore, I will provide an overview of gender of animals in modern reference grammar of English.

The third part provides an analysis of assignment of gender to animal species, which were chosen from the corpus that was analyzed - four volumes of the English issues of *National Geographic*, two volumes of *National Geographic Kids: South Africa*, examples given in other authors' works, and ones found in the social media. I divided the third part into two sections; the first one analyzes gender of nouns denoting lower animals, and the second one gender of nouns denoting higher animals.

At the end of the paper follows the summary of my research.

2. Theoretical Background

2.1. *Definition of gender*

In order to provide a theoretical background for my research, it is necessary to define the term 'gender'. Many linguists have been dealing with the study of the category of gender and one of the difficulties was to explain the history and definition of it. Etymologically, the term gender is derived from Latin genus, through French *gendre* 'kind' or 'sort'. Since it can refer to both a group of nouns and to the whole category of nouns, one can say that a particular language has masculine, feminine and neuter gender, and that a language has a category of gender (Corbett 1991: 1). A good starting point for understanding the meaning of gender is a definition by Charles Hockett where gender is said to be "classes of nouns reflected in the behavior of associated words" (qtd. in Corbett 1). Furthermore, gender features can be distinguished between

the natural gender[1] and grammatical gender[2]. Gender, for the most part, interacts with the biological sex or some other semantic trait, for instance animacy; other languages, however, have gender systems which rest on contrasts such as human vs. non-human, large vs. small, strong vs. weak, whereas again there are languages that have gender systems with clear-cut categories associated with, say, insects, edibles, liquids, etc. (Huddleston and Pullum 2002: 485).

Now that this section provided brief information on the definition of gender, I will move to its history.

2.2. *The History of Gender*

Gender is a complicated category, which has been changing throughout the history of not only the English language, but also other languages. However, in the following chapters I will concentrate on the history of gender in English, i.e. on its change from the grammatical to the natural gender.

2.2.1. *History of Gender in English: From Grammatical To Natural Gender*

In the fifth century BC, as described by Aristotle in the *Rhetoric and the Sophistical Refutations*, it was the Greek philosopher Protagoras who used the terms masculine, feminine, and neuter to classify Greek nouns, introducing the notion of grammatical gender (Kilarski 2013: 65). Protagoras commented on Homer's *Illiad* supposing that the masculine gender was more applicable to the feminine nouns *menis* "wrath" and *pelex* "helmet", given the words' referents. According to him, "wrath" should be used with "accursed" (a masculine form of the adjective) in the first line of the poem (ibid.). Ever since, the linguists have tried to explain the relationship between the grammatical gender categories and the world around them (Curzan 2003: 11).

As stated earlier, the English language differentiates two types of gender systems, that of grammatical and that of natural gender system. Language scholars have been interested in the history and development of the system of grammatical gender for a long time. According to Smith (qtd. in Barber 2001), a change from grammatical to natural gender occurred "in the East Midlands of England by the early twelfth century", and the gender system of Old English, comprised of feminine, masculine, and neuter, ceased to exist by being replaced by the so called logical gender, which is based on the sex of a referent noun (Welna 1978: 399).

[1] Natural gender is also referred to as biological gender or sex (Kramer 2010: 1).
[2] Grammatical gender is referred to as an arbitrary gender which is mostly associated with inanimate nouns (ibid. 2010: 1).

In contrast to most languages of the Indo-European family, the English language, for the most part, does not possess grammatical genders, i.e. inflecting nouns, pronouns, and adjectives as either feminine, masculine, or neuter (Wilton). To compare, German, for instance, has three genders (masculine, feminine, neuter), French has only two (masculine and feminine), whereas Croatian has four[3]. The only words in English inflected for gender are the third person, singular pronouns (he, she, and it) and the gender of these pronouns tends to correspond to the biological gender of the referent. However, there are several exceptions to this case, one of them being the personification of inanimate things, such as ships, which are referred to as she, or the use of it for animals whose sex is unknown or immaterial (ibid.).

Grammatical gender or noun class refers to a "system in which the class to which a noun is assigned is reflected in the forms that are taken by other elements syntactically related to it" (Comrie 1999: 457). It can be found in Old English or Anglo-Saxon (750-1100 or 1150 AD), which was the earliest recorded period of English, spoken in eastern Scotland and England, and brought to Great Britain by the Anglo-Saxon settlers in the fifth century. Its grammatical gender categories resemble those of Modern German, its sister language. As well as German, Old English had three genders - masculine, feminine, and neuter- and all inanimate nouns were parts of one of these three gender categories, either for morphological reasons or often for no apparent reason. For instance, Old English noun *Englaland* 'land of the Angles' is neuter, because its root land is a neuter noun. However, noun *mægð* 'tribe, race, country' is feminine, and *cynedom* 'kingdom' is masculine, since the suffix –dom marks masculine nouns (Curzan 2003: 12-13). As stated in the *History of the English Language* by Hogg and Davidson (2006: 70), some nouns of Old English showed either agreement or disagreement of grammatical and natural gender. For instance, a noun *mann* denotes a male person and has masculine gender and thus shows the agreement between the two genders. On the other hand, in nouns like *wīf* 'woman' there was a clear disagreement, since it denotes a female person, but has a neuter gender.

The loss of grammatical gender started somewhere in the tenth century in the north of England, spreading south over the next few centuries, until completely fading away from English by the mid-fourteenth century. For instance, according to Wilton (2010), a late-seventh/ early-eight century Latin manuscript the Lindisfarne Gospels had an interlinear Old English gloss added during the tenth century, where a masculine gender was assigned to the usually feminine *endung*, 'ending, conclusion', or both masculine and neuter gender were assigned to the same noun, *stan*, 'stone', but at different points. In Northumbria, the loss of grammatical gender was

[3] Croatian, or as Corbett puts it, Serbo-Croatian, is argued to have subgenders (Corbett 1991: 161-168).

completed for the most part by the beginning of the eleventh century, whereas in the Midland it was completely gone by the end of the thirteenth century. The loss continued in other parts of England with Kent being the last, preserving grammatical gender until the mid-fourteenth century. In early Middle English, the situation with grammatical gender becomes more complicated; for instance, nouns that tend to be feminine or neuter became masculine or vice versa. Furthermore, with the Norman Conquest, some words in English start to adopt the gender of their equivalents in French, so *mona* 'moon', that used to be masculine in Old English takes feminine gender under the influence of the French counterpart *lune*.
It is not certain what factors caused the disappearance of the grammatical gender in English, but some scholars believe that it is due to the disintegration of the inflectional system of Old English caused by the phonetic changes in the syllable (Wagner 2003: 38). In his article on grammatical gender, Dave Wilton (2010) says that, in modern English, nouns are only inflected for the genitive and plural, the accusative and dative cases collapsed into a single objective case applicable only to pronouns, whereas adjectives are not declined at all.

This section showed us how the situation of English gender has changed throughout the history, with respect to the grammatical gender that is said to be completely absent in the English gender system. In the chapters to come, I will try to answer the following questions:

- How is gender assigned to nouns in the world's languages? (chapter 2.3.)
- In what way can we assign gender to animal nouns? (chapter 2.3.1 – 2.4.)

2.3. *Assignment of gender to nouns in languages of the world*

Linguists, as well as non-linguists have been dealing with the question of assigning nouns to different genders. Native speakers recognize the gender of thousands of nouns in their language in contrast to foreign learners of the same language for whom this knowledge generally proves incomprehensible[4] (Corbett 1991: 7). The question is, how does a native speaker know the gender of a particular noun? Bloomfield argues that: „there seems to be no practical criterion by which the gender of a noun in German, French, or Latin could be determined"(qtd. in Corbett 7); in other words, there is no principle involved in knowing the gender of a particular noun (7). However, many scholars, including Corbett (7), believe that there are many factors that prove Bloomberg's statement false. For example, there is a considerable amount of words borrowed from other languages, and they acquire gender, which proves that there is a mechanism for assigning gender, not just remembering it. Moreover, native speakers have the ability to 'work

[4] This is true only for languages where gender tends to be involved in agreement relations.

out' the gender of a noun, and models of this ability are known as assignment systems. Following Hockett's definition of gender, Corbett (1991: 7-8) argues that gender systems have agreement as their defining feature, and says that gender assignment is based on two types of information about the particular noun: formal and semantic properties of nouns or their referents. Information about form relates to phonology and word structure, whereas information about meaning refers to features such as sex or animacy. Corbett (1991:8-30) differentiates three categories of semantic systems:

1. Strict semantic systems (natural gender systems):

   These are systems in which the meaning of a noun determines its gender and in which, equally, given the gender of a noun we can infer something about its meaning. This is the sort of system we might have expected to find as the normal case (Corbett 1991: 8).

"Such systems are commonly labeled as 'natural gender'" (Kilarski 2013: 12)

2. Predominantly semantic systems, "in which there are semantic assignment rules which, however, appear to allow sets of exceptions or otherwise 'semantic residues'" (Corbett 1991: 13).
3. Formal systems, "where semantic information is supplemented by morphological and/ or phonological information" (Senft 2000: 294).

From the total of 257 languages that Corbett analysed, 145 languages have no gender system (marked in white), 53 are based on semantic systems (marked in red), whereas 59 languages show both semantic and formal assignment (marked in blue) (borrowed from The World Atlas of Language Structures Online).

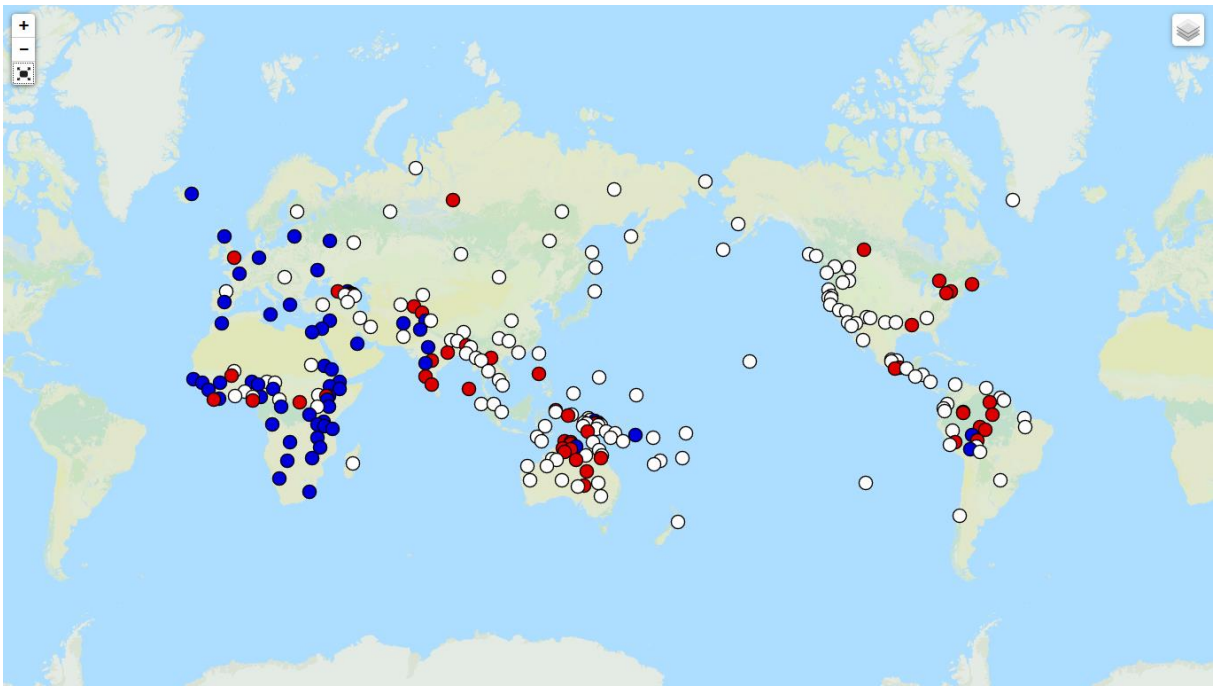

Figure 1: Systems of gender assignment in different languages of the world (Corbett, Greville. 'Systems of Gender Assignment'. The World Atlas of Language Structures Online. N.p., 2010. Web. 8 Sept.2015.)

Corbett argues that there are no gender systems established solely on formal properties of nouns, but that every gender system has a semantic core (1991: 8). In the coming section, I shall first examine strict semantic systems, and then move to others, which are primarily semantic.

2.3.1. *Assigning gender to animals in languages with strict semantic or predominantly semantic systems*

The following summary is based on Corbett (1991: 8-12; 32). Several examples of strict semantic systems can be found in the Dravidian family and different others languages in the world, although such systems are not particularly common.

Tamil, one of the major Dravidian languages, has about 50 million speakers, for the most part in Tamil Nadu in south-east India, but also in Sri Lanka and other parts of the world. “Given the meaning of a noun, its gender can be predicted without reference to its form.” (9) Nouns in Tamil are assigned to three genders (see table 1):

Table 1: Assignment in Tamil

Criterion	Gender	Examples	Gloss
God or male human	Masculine (=male rational)	aaṇ civaN	man Shiva
Godess or female human	Feminine (=female rational)	peṇ kaaḷi	woman Kali
Other	Neuter (=non-rational)	maram viiṭu	tree house

Source: Corbett, Greville G. Gender. Cambridge [England]: Cambridge University Press, 1991. Print: 9.

Corbett mentions few exceptions to the rules above, for instance the words denoting 'sun,' 'moon, and other heavenly bodies are both regarded as masculine, since they are also the names of gods. Furthermore, he points out that animals in Tamil fables tend to be treated as persons. Normally, animals in Tamil take neuter gender, even when there is a specific word for the female and male of animals. However, words like 'yaaNaai' (=elephant) can metaphorically be used with both masculine and feminine gender and it denotes "a man or woman with elephant-like qualities" (Corbett 1991: 9).

In Kannada, another language belonging to the Dravidian family, the situation is comparable to that in Tamil. "There is a very small number of exceptions to the semantic principles, words for bull and buffalo are masculine, gender reflects the special status of these higher animals[5]." (ibid. 10)

Telugu, another language in the Dravidian family, has a different morphological structure of gender; male humans are masculine, female humans are feminine, and other nouns tend to be neuter. The gender of heavenly beings relies upon what role they play in mythology; "thus *ganga* (the river Ganges) is feminine, *hanumantuDu* (Hanuman, a monkey) is masculine and *kaamadheenuvu* (divine cow) is neuter, and so on […]." (ibid. 10)

However, there are some other Dravidian languages like Kolami, Ollari, and Parji, which possess two, rather than three genders. The feminine and neuter genders in these languages seem to have blended, so that masculine gender, denoting male humans, is opposing non-masculine, which denotes all others (Corbett 1991: 10). In Parji, as stated by Burrow and Bhattacharya, all

[5] I will provide a definition and a detailed outlook of assigning gender to higher and lower animals in English in the following chapters.

supernatural beings are treated as neuter (qtd. in Corbett 10).

Corbett also mentions a Sepik Hill language of Papua New Guinea, Alamblak, which has two genders, masculine and feminine. The masculine gender involves nouns denoting males and things such as crocodiles, fish, long snakes, spears, arrows, which are thin, long, and slender, whereas the feminine gender, besides females, is used to denote short, wide, and squat objects: frog, turtle, house, trees, etc.

Many languages have semantic assignment rules that do not comprise the noun inventory as thoroughly as do the rules of Tamil or Kannada, i.e. the semantic criteria by which nouns are assigned to a particular gender may be less direct. Such languages allow sets of exceptions and, in order to analyze them, the idea of 'semantic residue' or 'remainder' will be beneficial. “Semantic residue comprises nouns whose gender is not assigned according to a positive semantic criterion.” (ibid. 13) This means that such nouns all belong to a single gender, which could be exemplified by the languages discussed above. For example, in Diyari, nouns indicating females tend to be feminine, and all other nouns, i.e. nouns in the semantic residue are masculine. Furthermore, there are cases in which the nouns in semantic residue are assigned to more than one gender. A good example is the Australian language Dyirbal.

Dyirbal is a language spoken in Queensland, Australia, where the nouns can be assigned to four different genders with the basic rules of semantic assignment (15). Corbett provides an example, based on Dixon’s (1972) study of Dyirbal, of how animals in Dyirbal can assigned to three different genders (Corbett 1991: 18-19):

(1) *Gender I (bayi): bats, kangaroos, possums, some fishes, some birds, most insects*

Gender II (balan): dog, platypus, some snakes, most birds, some fishes (stone fish, gar fish), scorpion, firefly

Gender IV (bala): bees

Numerous associations in Dyirbal, for example mythological or concept associations, can lead to a variety of exceptions. The following quotation exemplifies an exception based on mythological associations:

> Thus birds (which are animate and so would be expected to be in gender I) are believed to be the spirits of dead human females: they are therefore in gender II But some individual birds have mythological associations which put them in gender I (Corbett 1991:16).

Nouns in Dyirbal can also be distinguished by an important property, which can lead to them being assigned to a different gender. For instance, both the first (*bayi*) and the second (*balan*) gender categories include ‘some fishes’. However, two harmful species of fish, the gar fish and the stone fish, are assigned to gender II (*balan*) (ibid. 17), probably because of being associated with ‘fire’ and ‘fighting’, which are included in the same category.

This section showed us in which way some world languages assign gender to animal nouns. It has also been discussed that not all languages mark the category of gender as ±FEMALE, ±ANIMATE, or ±HUMAN, but that there are other, rather unusual, gender categories such as ‘non-flesh food’ and ‘fire’. The following section will deal with other ways of assigning gender to nouns in general, and to animal nouns specificallys, i.e. with phonological and morphological gender systems.

2.3.2 *Assigning gender to animals in languages based on formal systems*

In formal systems, information for gender assignment comprises inflection and derivation (morphology) and sound-structure (phonology) (Vazzosi 2006: 92). The distinction between the morphological and phonological rules is not always clear cut, for instance morphological rules use more information in comparison to the phonological rules that usually refer to a single form of noun (Corbett 1991: 261). These distinctions will be clarified in the coming chapters.

2.3.2.1 Morphological systems and phonological assignment systems

“The typical morphological feature involved in assignment systems is the feature determining the inflectional morphology of a noun” (Corbett 1991: 49). According to Corbett, morphological systems always have a semantic 'core' (1991: 34), but their dependency is limited to humans and higher animate referents (Booij et al. 2004: 1035); alternatively, assignment of gender will depend on declension. A typical example of a morphological gender assignment is Russian, an East-Slavonic language with three genders, masculine, feminine, and neuter, with each of them having two subgenders. Agreement is shown by adjectives, personal, possessive, and relative pronouns, and verbs. The feminine and masculine genders have a semantic core, as identified from the semantic assignment rules in Russian where sex-differentiable nouns denoting males (humans and higher animals) are masculine, as in *lev* 'lion', and sex-differentiable nouns denoting females, as in *l'vica* 'lioness'(Corbett 1991: 34). What is left is shared between the three genders.

In sex-differentiable nouns, a language can differ between one form used for males and

another one used for females. Russian has cases where the difference between the two genders is striking (as in the case of *lev* 'lion' vs. *l'vica* 'lioness') and where the sex is of great importance to humans, as in the case of domesticated animals (ibid.).

Morphological rules may overlap with the semantic rules. However, there are languages with declension classes where such overlap is not the case (ibid.). Again, in Russian, if nouns are not assigned by the semantic rules, they will be distributed across the genders; all nouns of declension I are masculine (as in *žurnal* 'magazine'), those belonging to declension II and III are feminine (as in *gazeta* 'newspaper'), and the rest is declension IV, i.e. neuter (as in *pis'mo* 'letter') (ibid.).

Another possibility for formal gender assignment is that, along with being determined by the meaning, the gender of a noun can also be determined by its phonological characteristics. A good illustration of such gender assignment is found in Qafar (Afar), a language spoken in northeastern Ethiopia and Djibouti. Corbett and Fraser collected the data from Parker and Hayward's *An Afar-English-French dictionary* (with grammatical notes in English) published in 1985. In Qafar the semantic assignment rules tend to be standard, i.e. nouns denoting males are masculine and those denoting females are feminine. However, Qafar also possesses a variety of nouns, also known as residue, which fall outside these rules. Such nouns follow phonological rules of gender assignment, for instance, nouns are feminine when their spoken or citation form ends in an accented vowel, as in *karmá* 'autumn'. All other nouns take masculine gender, for instance *gilàl* 'winter' is masculine because it ends in a consonant, whereas *baánta* 'trumpet' ends in a vowel, but with non-final accent. Nonetheless, some nouns in Qafar show the role of the semantic rules, for example, *abbà* 'father' is masculine, despite its ending in an accented vowel, which according to the phonological rules, implies a feminine gender. To conclude, Qafar shows clearly how the gender of a noun can be predicted on a basis of its phonological form. Any of the five articulates in Qafar (a, e, i, o, u) carries the accent in word-final position on nouns, so the gender can be derived from that final segment (Senft 2000: 300).

In French, the gender of a noun is also predominantly determined by the phonological rules. It has only two genders, the masculine gender, as in *moineau* 'sparrow', *élephant* 'elephant', *crapaud* 'toad', *papillon* 'butterfly', *chien* 'dog', *cheval* 'horse', etc., and the feminine gender, for instance, *grenouille* 'frog', *alouettee* 'skylark', *araigneé* 'spider', *jument* 'mare' (Zemkova 2009: 35).

2.4. *Pronominal gender systems*

Pronominal gender system is a "system where the gender of the free pronouns is determined by its antecedent" (Velupillai 2012: 166). In other words, pronominal gender languages mark gender only on personal pronouns, as is the case in many of the world's languages. Furthermore, this system shows the relation between gender agreement and gender assignment. The best example of a pronominal gender system is the English language, which will be discussed and exemplified in chapter 3.2.1.

3. Research design

3.1. *Source and target*

The aim of my analysis is to provide answers to the subsequent group of questions:

- How is gender assigned to nouns denoting higher animals?
- How is gender assigned to nouns denoting lower animals?
- What factors were involved in the assignment of the corresponding gender to both animal categories?

I have listed the set of data that has been used for my research:

1. Three complete volumes of the English edition of *National Geographic* (2010-2012)
2. Two volumes of the English edition of National Geographic Kids (2011-2012)
3. Transcripts of documentaries and shows, social media (Instagram, National Geographic Website)
4. Examples found in secondary literature

In order to explain on which gender system English bases its gender assignment and what factors were included in the assignment of gender to animals, I will look at the modern reference grammars of the English language in the following chapters.

3.2. *Overview of gender of animals in English in modern reference grammars*

Most grammars inform us that, when referring to an animal, the appropriate pronoun to use is *it*, except when the sex of the animal is obvious. The following grammars will be analysed:

- Alexander, L.G. (1998) *Longman English Grammar*. Longman
- Biber, D., Johansson, S., Leech, G., Conrad, S. and E. Finegan (1999). *Longman Grammar of Spoken and Written English. London*: Longman.
- Greenbaum, S. and R. Quirk (1993) *A Student's Grammar of the English Language*. Longman
- Huddleston, R. and Pullum, G.K. (2002) *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press
- Quirk, R., Greenbaum, S., Leech, G., Svartvik, J. (1985). *A Comprehensive Grammar of the English Language*. Longman

All grammars listed below provide a graphical representation of gender classes (see fig. 2-5):

people:	*man. actor.*	*he*
	woman, actress-	*she*
	guest, student, teacher-	*he* or *she*
animals:	*bull, cow*	*it*
things:	*chair, table.*	*it*

Figure 2: Classification of gender in *Longman English Grammar* (Alexander, L. G, and R. A Close. *Longman English Grammar*. London: Longman, 1988: 49.)

	example noun	pronoun
personal/human:		
masculine	*Tom, a boy, the man*	*he*
feminine	*Sue, a girl, the woman*	*she*
dual	*a journalist, the doctor*	*he, she*
non-personal/neuter:	*a house, a bird*	*it*

Figure 3: Classification of gender in *Longman Grammar of Spoken and Written English* (Biber, Douglas. *Longman Grammar Of Spoken And Written English*. Harlow, England: Longman, 1999: 312.)

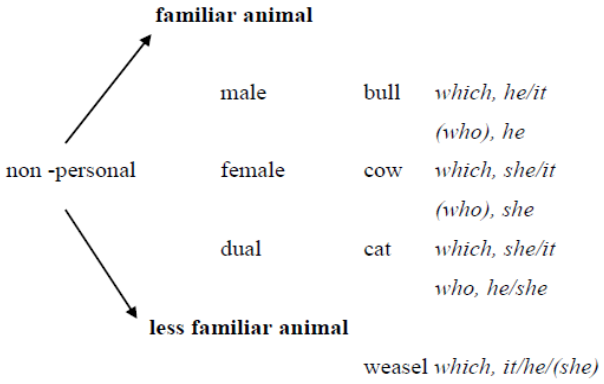

Figure 4: Classification of gender of animals in *A Student's Grammar of the English language* (Greenbaum, Sidney, and Randolph Quirk. *A Student's Grammar Of The English Language*. Harlow, Essex, England: Longman, 1990: 100.)

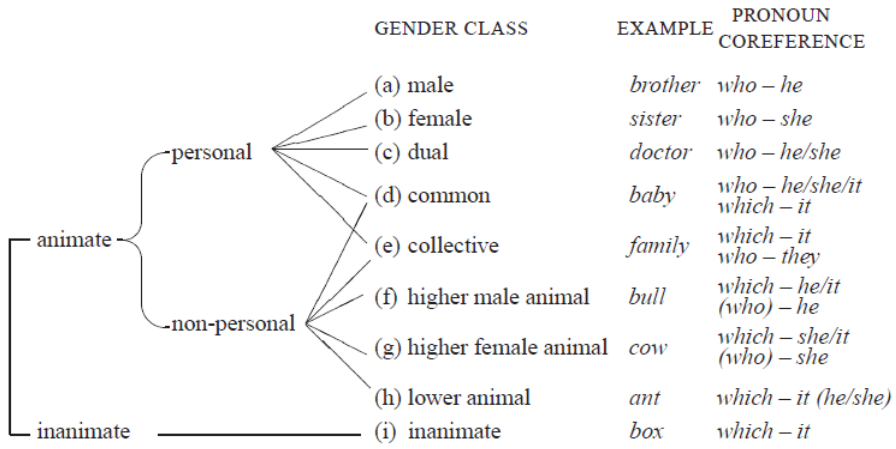

Figure 5: Classification of gender in A Comprehensive Grammar of the English language (Quirk, Randolph. *A Comprehensive Grammar Of The English Language*. London: Longman, 1985: 314.)

Both *A Student's Grammar of the English language* (Greenbaum et al. 1990: 100) and *Longman Grammar of Spoken and Written English* (Biber et al. 1999: 312) share a very similar representation of gender classification of animals in English (see fig. 3 and 4), i.e. both grammars classify animals as non-personal.

Longman English Grammar (Alexander, 1998: 49-50) provides only general information about gender, as shown above (fig. 2). Furthermore, the author also determines the masculine and feminine gender of animals by (ibid. 50):

- contrasting nouns describing animals (normally replaceable by *it*)

bull- cow, cock(or rooster)- hen, dog- bitch, gander- goose, pig- sow, ram- ewe, stallion- mare

- –ess endings and other forms indicating sex/ gender: *leopard- leopardess, lion- lioness, tiger- tigress*
- the stressed prefix *he-/ she, e.g. in he- goat/ she- goat, he- wolf/ she- wolf.*

A very detailed representation of gender assignment in animal nouns is found in A Comprehensive Grammar of the English Language (1985) by Quirk et al. The authors differentiate nine gender classes with three of them being concerned with animal nouns, as illustrated above (see fig. 5). Animals are divided into two categories, higher and lower animals:

- Higher male and higher female animals, whereby the male/ female gender distinctions are maintained by people with a special concern (as in the case with pets), for instance dog for the male (with which-it or who-he coreference) and bitch for the female (with which-it or who-she coreference) (ibid. 317). Some other examples provided by Quirk et al: Buck-doe, bull-cow, cock/ rooster <AmE>-hen, gender-goose, tiger-tigress, etc. Generally, there is no need for making gender distinctions in cases as dog-bitch or stallion-mare. One can use one term to cover both sexes, for instance dog for both dog-bitch, or use a completely different word, as in horse to cover both stallion and mare (ibid. 317).
- Lower animals (e.g. ant, fly, spider, snake, toad) use *it* and *which* as pronouns, although they can also be viewed as higher animals. For example, one may speak of 'bees who are busy', etc. (ibid. 317).

Different gender markers can be used to indicate sex differences for any animate noun when gender is felt to be relevant, for instance: *male-female frog, buck-rabbit/ doe-rabbit, cock-pheasant/ hen-pheasant, dog-fox/ bitch-fox, he-goat/ she-goat*, etc. (ibid. 317).

From the grammars listed above, the most comprehensive explanations concerning the gender of animal nouns is found in Huddlestone and Pullum's *Cambridge Grammar of the English language* (2002). Animals are treated as non-humans, as can be seen from the following examples provided in the book:

(2) The bull turned his/ its head.

(3) The cow was lying on her/ its back.

(4) The dog looked as if he/ she/ it needed a good brush.

In such cases, the difference between the pronouns he, she on one side and the neuter pronoun it on the other side depends on whether the speaker decides to encode the referent's sex (ibid. 489).

All grammars mentioned above agree on the fact that, when speakers do not know the sex of the referent, they mostly use the neuter pronoun it, although they may also use he or she when making an arbitrary assumption about the referent's sex, when referring to "pets, domesticated animals, and creatures ranked high in the kingdom of wild animals (such as lions, tigers, elephants, etc.)"(Huddleston and Pullum 2002: 489), or when referring to animals by a proper name. In the latter case the use of he or she obligatory (ibid. 489).

The focus in most grammars appears to be on the use and assignment of gender in written English. Furthermore, according to the majority of the grammars, animals are treated as inanimates or non-personal, hence, they are referred to by a neuter pronoun *it*.

According to the survey presented above, it appears that the following factors are crucial for the choice of pronouns (gender assignment) with animal nouns:

- **Emotive factors and personal involvement**
  Most of the grammars studied agree that the choice of pronoun when referring to animals may depend on emotional involvement. The best examples are provided in contexts where people refer to their pets with *he/she*, instead of *it*.
- **Position in the kingdom of animals**
  Animals can be classified into two categories, higher and lower animals. In the classification of gender provided by Quirk (1985: 314) it can be seen that higher animals are more likely to be referred to as *he* or *she*, probably because their natural gender (sex) may be easier to distinguish.
- **Speaker's background/ profession, etc.**
  Laymen tend to use the neuter pronoun when referring to animals they are not familiar with, and masculine/feminine pronouns when making arbitrary assumptions. In contrast, people whose profession requires the knowledge of animals, for instance zoologists and researchers, will, for the most part, refer to an animal with masculine or feminine pronoun.

3.2.1 *Gender systems in present-day English*

From the grammars listed in the previous chapter, the most comprehensive explanations concerning the gender in English are found in Huddlestone and Pullum (2002). Among other things, the authors also deal with the question of gender system found in English, and they disagree with the argument that English has no gender system, which can be found in Biber et al. (1999: 311):

> Gender is a less important category in English than in many other languages. It is closely tied to the sex of the referent and is chiefly reflected in co-occurrence patterns with respect to singular personal pronouns (and corresponding possessive and reflexive forms).

Instead, Huddleston and Pullum regard the differences between English and other gendered languages, such as German or French, as "a difference in the degree to which gender is grammaticalised in these languages, not in whether or not they have a category of gender" (2002: 485).

As discussed earlier, English was previously based on the grammatical gender system, which disappeared by the end of the fourteenth century, though traces of grammatical gender can still be found in English gender system, particularly in pronouns. Present-day English is based on natural gender system, where the gender is associated with the sex of the object in real world.

Furthermore, English gender is largely a covert category where gender is not visible from the noun itself, but through co-occurrence of related pronouns, as in the “boy...he” (Corbett 1991: 62-63). However, there are also rare instances where gender in English can be inferred from the form of a noun, i.e. expressed overtly, as shown by Brinton (2000: 106):

- by derivational suffixes, such as feminine suffixes -ine (hero/heroine), -ess (god/godess), -rix(aviator/ aviatrix), and -ette (suffragist/ suffragette) or the common suffixes -er (baker), -ist (artist), -ian (librarian), -ster (prankster), and -ard (drunkard);
- by compounds, such as lady-, woman-, etc.
- by separate forms of masculine, feminine, and common genders, such as boy/girl/child or rooster/hen/chicken; and
- by separate forms for masculne and genders such as horse/ mare, etc. and proper names such as Joseph/Josephine

As mentioned previously in chapter 2.4., English is known to be based on a pronominal gender system, which is the only area of grammar where agreement in English is triggered and it

can be found in traditional English dialects. It is realized anaphorically between the pronoun (personal, possessive, or relative) and the head noun, i.e. the pronoun *he/his/him* refers back to masculine gender nouns, pronoun *she/her/hers* to feminine nouns, and *it/ its* to neuter gender nouns and they are distinguished on the basis of strictly semantic criteria, being classified as animate and inanimate. Animate nouns agree with the relative pronoun *who*, whereas inanimate nouns agree with the relative *which* (ibid. 105). However, Huddleston and Pullum (2002: 485-486) mention some instances where the linguistic form of the head noun reduces the choice of pronoun, as exemplified below:

(5a) *The dog has lost his/its bone.*

(5b) *Fido has lost his/*its bone.*

Both *the dog* and *Fido* denote the same animal of masculine gender, but the fact that the second sentence has a proper noun as its antecedent rules out the possibility of using the neuter pronoun *it*.

Another feature of the English gender system worth mentioning are dual or common and triple genders. Huddleston and Pullum note that the dual gender noun is a noun where the pronoun of either two genders determines the head, so one can distinguish between the dual-gender masculine/feminine nouns (as in actor, narrator, doctor, etc.), masculine/neuter nouns (as in bull, cock, he-goat, etc.), and feminine/neuter nouns (as in lioness, mare, boat, car, etc.) (ibid. 489-491). Similarly, triple-gender nouns can be referred to as masculine, feminine, and neuter, but they are restricted to young humans and animals whose biological sex is not specified, for instance baby, goat, blackbird, lion, octopus, etc. (ibid. 489).

To sum up, although many scholars claim the opposite, English does have a gender system. Nevertheless, it is only weakly grammaticalised, being established exclusively on pronoun agreement. In the following chapter we turn to the analysis of part of this system, namely, the gender of nouns denoting higher or lower animals.

4. Analysis

4.1. *Gender of nouns denoting lower animals*

Oxford English Dictionary Online defines lower animals as "animals of relatively simple or primitive characteristics as contrasted with humans or with more advanced animals such as

mammals or vertebrates." What follows is a list of some species under study belonging to the category of lower animals:

- **ants, honeybee, fly, some sea species (clownfish, jawfish, seahorse), snakes, birds**

1. **Ants (Bulldog ant, Leafcutter ant, Marauder ant, etc.)**

From the materials that contain species of ant listed above and that have been analysed, I found that, in most of them, the ants were being referred to with either neuter or feminine gender.

The only exception where they were being referred to as having masculine gender was in situations describing the mating process of drones (male ants):

(1) "*The **drone's** role ends with the frenzied glory of the nuptial fight. **He** dies shortly thereafter, burned out and literally consumed from within by **his** brief, energy-intensive life of sperm production.* (National Geographic June 1984: 794)

The possible explanation for the use of feminine gender can be found in the fact that "ant colonies are female societies" (National Geographic June 1984: 775) with female workers (ibid. 789) and with the queen as its most important member. The following examples prove the conclusions above to be true:

(2) "*The **queen** carries the primary burden. That puts **her** understandably at the center of most ant colonies' attentions. Moreover, **she** fosters **her** daughters' devotion"* (National Geographic June 1984: 794).

(3) *A: "That is a massive **soldier who** has just found a crease in my skin."*
B:"Yeah."
*A: "[…] has sunk **her** jaws right into my skin."* ("Planet Ant: Life Inside the Colony")

(4) "*With **her** superior vision, however, a **bulldog hunter** can race around a carpenter ant, […] and thrust in **her** stinger before **her** bewildered victim has a chance to marshal a counterattack. Primitive, perhaps. But **she** gets the job done."* (Moffett, "Lone Huntress")

The use of feminine for *soldier* and *bulldog hunter* can be explained in the same way as for the ant queen: "In ants, all individuals that perform work for the colony are females. We usually refer to these ants as 'workers', but in some ant colonies that have different roles, specific workers are sometimes referred to as 'soldiers' or 'nurses'" (Kautz 2010).

As already mentioned, another pronoun used in reference to ants was a neuter pronoun it. Zemkova (2009) believes that the possible reasons for the use of neuter might be the author's individual approach or because the focus was on the general distribution of ants' life cycle (2009: 46):

(5) "*I never saw a **marauder ant** searching for food on **its** own. **The Asian jumping Ant, known** for **its** ability to make great starling leaps, may travel as far as a hundred feet from **its** nest* […]." (National Geographic August 1986, qtd. in Zemkova 39)

2. Honey bee

When referring to honeybees, all three gender markers were used and the explanation for that is very similar to that of ants. Honey bee colonies consist of the queen bee, drones (male bees) and worker bees that are entirely female (Orkin.com; National Geographic Website). Feminine was used when referring to the queen bee or her workers. I have listed some examples when honey bees were referred to as having feminine gender:

(6) *"Although the **honey bee queen** is thought by many to be the most important member of **her** colony, honey bee workers sometimes determine when their colony is in need of a new queen."* (Orkin.com)

(7) *"**The worker bee** has a barbed stinger that results in **her** death following stinging, therefore, **she** can only sting once."* (Back Yard Beekeepers Association Website)

Once again, drones or male honey bees are referred to as masculine.

(8) *"A **male honey bee** is essentially a winged penis doomed to die immediately after losing **his** virginity. On summer afternoons, **male bees**—known as **drones**—emerge from many different hives and gather in a small swarm."* (Jabr, "More Than Honey: A New Documentary Offers Spectacular Close-Ups of Bees Mid-

Flight and Perspective on the Worldwide Honeybee Crisis")

Neuter was used to refer to the species in general.

(9) *"'I couldn't really photograph one **bee** for the whole 21 days of **its** life cycle, so I broke **it** up and I tried to capture each transformation that happens,' he says."* (Rowell, "For a Biologist-Turned-Photographer, a Beehive Becomes a Living Lab")

3. Fly

When referring to flies, neuter gender was used predominantly, especially by laymen, who cannot distinguish the gender of a fly, and because neuter gender is usually assigned to lower animals. However, I will provide some examples where flies were addressed as he or she, typically by authors of articles on scientific blogs, zoologists, but also because to extent, emotional factors and personal involvement of the speaker/author were also at play.

(10) *"The **male Mediterranean fruit fly** secretes **his** cologne from a special place. The ladies love it ... but local predators also home in on the scent."* ("World's Weirdest: Smelly Fruit Fly Cologne")

In the example above, the speaker uses gender marker *male* to indicate the sex/gender of the fly, therefore the use of the personal pronoun *his* in masculine to refer to the fly. Similarly, when using gender marker *female*, the fly will be addressed as *she/her*. For instance:

(11) *"**Flies** generally engage in courting or mating behavior, after which they copulate. The **female** then produces eggs, assuming **she** can eat enough and find a suitable medium in which to lay them"* (Moore, "Do Flies Have Genders?")

As mentioned above, speakers were referring to flies with *he/she* also when emotional factors were included. For instance, in *Fly,* a thirtieth episode of AMC's *Breaking Bad,* there are several examples where fly is referred to as being neuter and masculine. A possible explanation might be the perception of the fly based on certain emotional factors, for instance the protagonist describes it as a "contaminant", i.e. he fears that it might harm the environment[6] in which they were at the

[6] A laboratory in which they were producing methamphetamine.

moment. The fly might also symbolize Walter White's conscience or it might be the cause of his anxiety, etc.

(12) *Walter White: Jesse, listen. This **fly**… No, any **fly** cannot be in our lab. **It**'s a problem. **It**'s a contamination.* ("Fly")

(13) *Jesse: „We're making meth here, all right? Not space shuttles.*
*Walter White: We're making nothing until we catch this **fly**.*
*Jesse: What **fly**? All right? Where the hell is this **fly**? Not like I even seen the thing. Maybe your positive pressure blew it out the door or something.*
*Walter White: No, no, **it** is here. **It** is around, okay? **He**'s around, and I am not going to expose this batch to the open air and contamination, period.* ("Fly")

4. Fish (Clownfish, Jawfish)

Zemkova points out that the use of neuter pronoun is typical for the "description of life cycle, observation and youngsters" of fish (2009: 47).

(14) "*If the young **fish** doesn't find an anemone and acclimatize to **its** new life, **it** will die"* (National Geographic January 2010:125).

Fish can be also referred to as *he/she*, which can be distinguished by the use of gender markers male/female before the noun (fish). Clownfish are all born male, which accounts for the use of masculine gender in reference to them. The following sentences exemplify the use of the masculine gender to refer to the clownfish:

(15) *"A **male tomato clownfish** tends **his** field of developing eggs like a gardener, scooping away ones with dead embryos. **He** oxygenates the eggs by fanning them with **his** pectoral fins" (*National Geographic January 2010: 128).

However, the following sentence shows an exception where, despite the fact that gender marker *male* was used before the noun *jawfish*, the animal was still being referred to as *it*:

(16) "*Nearly camouflaged on the debris-strewn bottom of Florida's Lake Worth Lagoon, a six-inch long **male jawfish** holds hundreds of eggs in **its** mouth […]"*(National Geographic October 2010: 10-11).

5. Seahorse

According to research conducted by Zemkova, sea horses are the only species of fish referred to predominatly as *he* or *she* (2009: 52). Zemkova believes that the predominance of the masculine gender in this animal is the result of comprehensive descriptions of their lifecycle, behaviours, and processes of reproduction (ibid. 104). From all the data I analysed, I found only one case in which neuter pronoun was used, despite the fact that the author provided gender marker *male*, whereas in other cases *it* was used because the speaker either did not know the animal's gender, or he was referring to the species of seahorses as a whole:

(17) "*The **male** seahorse has a pouch on **its** stomach in which to carry babies—as many as 2,000 at a time."* (Danielson, "Seahorse Fathers Take Reins in Childbirth")

(18) *"If you want to handle a **seahorse** and you offer **it** a finger, **it** stays calm and relaxed as long as **it** can hold your hand."* (The Corporation for Public Broadcasting)

The dominance of masculine gender here is probably also due to the fact that male seahorses play a very important role in their world, i.e. they give birth to their offspring, and take care of parenting (Danielson 2002), which is an amazing natural phenomenon. When we try to make sense of the fact that male seahorses give birth to their offspring, it becomes clearer why they are referred to as *he*. I provided some examples below:

(19) *"Over the course of **his** breeding season, this **seahorse** will father over a thousand young, all nurtured within **his** body. The **male seahorse** is distinguished from the **female** by a pouch which acts as a womb*." (The Corporation for Public Broadcasting)

6. Snakes

Snakes are believed to be always neuter with the special case of boa. Boa is feminine, probably because of being associated with the women's clothing accessory (Vomlela 2001: 139). The use of feminine is also typical when referring to the reproduction of snakes (see example 21).

(20) *"**It** is the largest true **cobra** species with a length up to 3.1 meters (10.1 feet).(I have also photographed the **King Corba** on many occasions and **it** grows much bigger but is the sole member of **its** own genus)." (Instagram)*

(21) **"***The **python**, including the imported Burmese now living and breeding in Florida, actually incubates **her** eggs by curling around them and raising **her** body temperature through muscle contractions."* (Adams, "Live Bearing Snakes vs. Egg-Laying")

7. Birds

When referring to birds, such as bald eagles, owls, or penguins, it seems that emotive masculine and feminine genders are the genders of choice (see example 23), especially if such species are endangered. Neuter pronoun is used in contexts such as observation, when describing their reproductive system, and many others. Furthermore, laymen might use the neuter marker because they are not familiar with the sex/gender of a particular bird. The following sets of sentences exemplify the use of neuter marker in context of observations:

(23) *"A muskrat swam toward its house of cattails and aquatic grasses. Then the flash of a white head and tail caught my eye! An eagle had alighted on an old nest 85 feet above ground in a white pine. I saw the large yellow beak deftly move left and right, up and down, as the **female eagle** intertwined twigs and reeds. **She** was renovating a nest that **she** and **her** mate had used the previous three years"* (National Geographic February 1978: 191)

(24) *"When an **emperor penguin** swims through the water, it is slowed by the friction between **its** body and the water, keeping **its** maximum speed somewhere between four and nine feet a second."* (National Geographic November 2012: 64)

Neuter is also used when referring to chicks, i.e. birds' offsprings.

(25) "*This recently hatched **Cape Gannet chick** is completely reliant on **its** parents for shelter from the hot African sun during the day and bitterly cold and damp conditions at night."* (Instagram)

As explained earlier in chapter 3.2., the gender of some bird species can be distinguished by using contrasting nouns to refer to them. For instance, male Mallard ducks are referred to as either drake Mallard or male Mallard, whereas females are referred to as hen Mallard.

(26) *"During early summer, the **drake Mallard** undergoes a postnuptial (prebasic) mold and requires **his** dull eclipse plumage."* (Ryser 1985:140)

(27) "*Not only does the **hen mallard** quack, but **she** does it loudly, shrilly, repeatedly, and at times, such as in the fall, when most ducks are quite silent."* (Ryser 1985: 145)

4.2. *Gender of nouns denoting higher animals*

In Oxford English Dictionaries Online, higher animals are defined as "animals of relatively advanced or developed characteristics, such as mammals and other vertebrates."

In this section, I discuss gender assignment with higher animals using a slightly different approach. The data and findings will be presented not according to specific animals (see section 4.1. above), but according to the following factors that influence gender assignment:

- Emotional factors and personal involvement
- Referring to an animal species in general
- Use of derivational prefixes/suffixes
- Use of contrasting nouns
- Speaker's/author's background, profession, etc.

1. Emotional factors and personal involvement

In accordance with most modern reference grammars of English, speakers refer to higher animals as *he* or *she* when emotional factors may be involved. In such situations the speaker/author may address the animal by its name, when given. This is frequently the case when pet owners refer to their pets.

(28) *"**Graeme the cat** doesn't hang out at home waiting for **his** owner, Nichole O'Duffy, to return from work at the end of the day. **He** goes to the train station to meet her"* (National Geographic Kids July 2012: 9).

(29) *"**Lurch the African watusi**, whose horns have the largest circumference of any steer, could come in handy. Although here **he** looks as if **his** horns [...] could do*

*some serious damage, **his** owner calls **him** a gentle giant"* (National Geographic Kids June 2011: 8).

(30) *"Grumpy, mean and nearly blind, **Bear the bobcat** was friendless and alone at the sanctuary where **he** lived. Staff worried about **his** mental health until they had an idea: why not introduce **him** to an equally grumpy cat?"* (National Geographic Kids June 2011: 10)

2. Reference to the particular animal species as a whole

From the corpus analyzed, I came to conclusion that neuter gender was used mostly when referring to an animal species as a whole. Below are some examples found in different volumes of *National Geographic* and *National Geographic Kids: South Africa*:

(31) *"Smallest of the **big cats** – **males** may reach 50 pounds- **it** has canine teeth as long as a tiger's. An acrobatic climber, **it** hunts in trees as well as on the ground in forests across Southeast Asia" (*National Geographic December 2011: 90)

(32) *"**Black rhino** is as grey as the white rhino, but **it** is smaller and has a hooked mouth. **It** is not nearly as social as **its** cousin and prefers to roam alone"* (National Geographic Kids January 2012: 16)

(33) *"An **otter** has about 800 million hairs on **its** body. The fur is the otter's shield from the sea"* (National Geographic Kids September 2011: 32).

(34) *"Here comes the **silverback gorilla**. This primate is a large and powerful animal.The gorilla moves through the jungle and stops to flex **its** muscles. **Its** arm muscles are larger than **its** leg muscles and **it** uses them to break heavy branches* (National Geographic Kids July 2012: 15).

3. Use of derivational prefixes/suffixes and contrasting nouns

As mentioned earlier in chapter 3.2., the gender of a particular animal can be determined by placing stress prefixes, such as *she-wolf*, or suffixes, such as – ess in *tigress or lioness*. I did not find many such examples of in the issues of National Geographic under study, mainly because gender markers male/ female were added to a particular animal species.

(35) "*There is a moving moment in the film Born Free, when **Elsa the lioness** walks across an African savannah towards the couple who hand-reared **her**.* (Eede, "Elsa the Lioness: The Spirit of Born Free on World Lion Day").

(36) *"Two **Druids**-a **female** labeled **Number 571** and **her** younger brother, called **Triangle Blaze**, for **his** white chest patch-were travelling by the river when three invaders […] appeared. […] Outnumbered, the Druid pair gave way first, but the Hurricanes caught up to **571**. Four times they pulled **her** down onto **her** back"* (National Geographic March 2010: 43).

(37) *"**Male gelada monkey** flashes **his** teeth at a rival male"* (Instagram)

(38) "*The **male great argus** of Southeast Asia is a fairly drab **pheasant**-until **he** dances before a female with **his** enormous wing feathers fanned open, revealing the spectacular inner surface shown on this four-inch section"* (National Geographic February 2011: 70)

(39) *"Did you know that there is a population of wolves where over 80% of their diet **is comprised of seafood? Here, a female wolf carries back the bodies of two large** coho salmon to **her** den"* (Instagram)

Furthermore, speakers also used contrasting nouns to distinguish the gender of animals. Neuter was used for denoting animals' offspring. For instance:

(40) *"Wildlife experts struggle to place a GPS satellite collar on a tranquilized **bull elephant** in Boma National Park"* (National Geographic November 2010: 84).

(41) *"In the matriarchal world of **elephants**, **males** are known as mostly independent sorts. Females maintain close, lifelong family ties, while **bulls** tend to wander off solo, at times banding with another **male** […]" (*National Geographic June 2010: 24).

(42) *"A **white rhino cow** (at left) grazes with a **bull** that has become **her** companion after a poaching attack in KwaZuli – Natal Province, South Africa. Using a helicopter, a gang tracked **her** and her four-week-old calf"* (National Geographic March 2012: 120).

4. Speaker's/author's background, profession, etc.

Masculine and feminine gender appears to be used mostly by zoologists, authors of the articles or photographers. The possible explanation for that might be the fact that zoologists, photographers are familiar with the animals they encounter, therefore familiar with their sex/gender too. On the other hand, laymen tend to refer to a particular animal as *it*, mostly because they refer to an animal that they have yet never seen. Below are some examples:

(43) *"A **mother polar bear** sniffs the air. When **she**'s satisfied that the area is safe, **she** squeezes **her** huge body through the small opening. **She** hasn't seen daylight in five months"* (National Geographic Kids July 2012: 30).

(44) *"I knew that finding these elusive coastal wolves would prove challenging, but I never expected it to be nearly impossible! After weeks of sitting motionless in blind, the **den mother** brought **her** pups in front of me and proceeded to nap while they played. It was worth the wait as they are about the cutest creatures I have ever seen!"* (Instagram).

(45) "*The extraordinary animal that changed our lives was still a wobbly, half-blind, eight-day-old **cub** when encountered **her** with **her** mother […]"* (National Geographic December 2010: 198).

In the following sets of examples we can see that the author first refers to the *cub* as *it*, and later in the article as *he* because what follows later is the fact that the cub was given a name by its caretakers:

*(46) "Like a homeless kitten a lone **Amur tiger cub** wanders aimlessly around an isolated village in southeastern Russia. **Its** scraggly, matted fur makes the little creature appear more ragged than cute. "(National Geographic Kids September 2011: 20)*

*(47) "The **cub** gets a high-calorie porridge rich with nutrients, which **he** eagerly devours. And the staff gives **him** a name: **Oleg**"* (National Geographic Kids September 2011: 20)

*(48) "Ian flies to Russia to evaluate the **cub**. 'If **he** walked out and rubbed up against the bars of **his** pen when people are there, we couldn't let **him** go"* (National Geographic Kids September 2011: 20)

5. Conclusion

Starting from the authoritative typological analysis of gender in Corbett (1991), this study has explored the assignment of gender to nouns denoting higher and lower animals in English. The paper opened with the discussion of the theoretical background into systems of gender assignment, viz. semantic and formal systems. This provided a useful platform for the discussion of the corpus of animal nouns collected mainly from the English editions of *National Geographic* (2010 – 2012) and *National Geographic Kids* (2011 – 2012). Several factors were shown to be useful in the assignment of gender and in the discussion of gender with animal nouns, viz. the use of gender markers, the degree of the speaker's personal involvement, and speaker's background.

The corpus analysis shows that the use of different masculine and feminine gender markers prevails when denoting the biological sex of both lower and higher animals. In the category of lower animals the dominance of feminine gender can be seen in some insect species (ants, honeybee) that have strictly organized colonies with female dominance. Both the masculine and feminine gender was used when describing animals' mating process, when observing their behaviour or when emotive factors were included, for instance, when pet owners were referring to their pets. Neuter gender was also used in relatively general contexts, such as observation and when referring to the species as a whole. In the category of higher animals the use of masculine and feminine genders appears to dominate over the use of neuter gender. Here, emotional factors and personal involvement of the speaker played the most significant role. Neuter gender was used predominantly when speakers wanted to provide general information about the species of a particular animal. Furthermore, neuter was also used when referring to animals' offspring.

It can be concluded that gender assignment in animal nouns is not exclusively the result of linguistic factors, but it may be also influenced by the interaction of various other factors. Determination of gender in animals, especially in those that are less common, might cause difficulties for someone who is not an animal researcher or zoologist. Conversely, laypeople will possibly restrain gender differences only to their pets. Furthermore, the male/female assignment also appears to be under the influence of various factors, which are not related to the biological sex. As we have seen earlier, fly was referred to as he, not according to its biological sex, but because emotional factors, such as fear and anxiety were included in the context. Although in theory it may be possible, I did not find many such examples in my corpus analysis. However, it may be due to the fact that the majority of my corpus analysis was based on National Geographic articles and documentaries, which, for the most part, discuss behaviour of animals and their

reproduction processes where biology plays an important role.

When it comes to gender assignment, higher animals appear to be different from lower animals predominantly on the basis of natural sex, which can be distinguished more easily in the former category. However, from the corpus I analysed, it can be seen that masculine and feminine genders can be assigned to both animal categories, predominantly because same factors for assigning gender were included. Nevertheless, although some tendencies can be seen, the corpus that I analysed may not be comprehensive enough to make firm conclusions. In order to establish them, a more extensive research into gender assignment with animal nouns is needed.

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