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## THE ISSUE OF GENDER IN MULTIPLE LANGUAGE ACQUISITION

### Abstract

The present article focuses on the issue of perception of gender in the case of multiple language acquisition. Each language displays a variation of gender system that is culturally determined and unique. There are languages in which the role of grammatical category of gender is predominant, whereas other display reduced gender systems or they are completely devoid of this feature (Corbett 1991). Since the grammatical category of gender is still the most confusing for many linguists, the authors decided to explore the relation between complex gender systems of Polish and German, and the reduced gender system of English in the process of acquisition.

The article has a twofold structure: first the theoretical framework is provided to outline the gender systems of the above mentioned languages, and then the research is described and discussed. The main purpose of the conducted research was to investigate to what extent a native language and a second language influence perception of the gender system of a third language. Though it is generally acknowledged that English is devoid of a typical gender system, the authors of the article believe that the learners of English ascribe subconsciously gender to some English nouns transferring gender either from L1 or L2. The problem may seem irrelevant for any discussions for native speakers of English, who indeed perceive concepts without ascribing any gender to them.

### Key words

*Gender acquisition; multilingualism; L3 acquisition*

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### 1. Introduction

The issue of language transfer has been a controversial topic for many years. There have been a substantial number of studies concerning the influence of the

knowledge of a native language upon second language acquisition (e.g. George 1972). Since every language has its own system, acquiring foreign languages may cause problems, inasmuch as languages comprise in both similarities and differences that may become obstacles in the process of acquisition (Lado 1957). Due to the present demand for the knowledge of several foreign languages, the area of the research into cross-linguistic influence expands into the relation between not only L1 (native language) and L2 (second language), but also between L2 and L3 (third language), and the subsequent languages. Thus, as Jessner (2006) notices, the research in the field of L3 acquisition is complex as it investigates many parallel relationships.

## 2. Main issues related to gender systems

In some languages, gender system is very complex, and in others, it is absent. The gender classification frequently corresponds to the sex distinction in a real world, but originally gender meant 'sort' or 'kind' of a noun, from Latin *genus* denoting type of an object, and this is the meaning of *gender* for contemporary linguists (Huddleston and Pullum 2002). Pinker (1994) points out that in many languages the gender of nouns corresponds to the distinction *he/she*, hence to the distinction of sex, and this differentiation is marked by sounds i.e. word endings or they are classified into categories without any marking.

In the Polish language, the semantic and the formal rules of gender assignment coexist. According to Corbett (1991), there are three genders in singular: masculine, feminine, and neuter, and two in plural: masculine personal and the remainder. Polish has grammatical gender that is indicated by inflectional endings. According to Fisiak et al. (1978), the gender agrees with adjectives, verbs, demonstrative pronouns, and numerals (ex. Personal feminine. *Ta wysoka kobieta głośno śpiewała.*). Additionally, as Corbett (1991) notices the agreement markers in Polish exist for both singular and plural form.

Usually, the semantic assignment works in nouns denoting humans, therefore, females are feminine, and males are masculine. However, there are some exceptions to this rule. For instance, nouns that denote young humans or animals are neuter (*dziecko, niemowlę, szczenię, prosię*). The neuter gender is taken by also diminutives and augmentative forms (*chłopię, babsko, psisko*). Additionally, Polish has some nouns that refer to males but decline in singular like feminine nouns, e.g. *artysta – artyście, artystę*, or *poeta – poecie, poetę* (compare with feminine *kobieta – kobiecie, kobietę*). These nouns, however, are accompanied by verbs and adjectives that take masculine forms (*wielki artysta zmarł*) (Fisiak et al. 1978).

In the case of the majority of non-human, animate nouns (animals), their gender is not semantically determined (*ten lis, motyl* and *ta ćma, lasica*). Only the animals that are considered as higher, especially domestic animals, have separate forms indicating the masculine and feminine gender (*byk/krowa, ogier/klacz, kocur/kotka*).

German system of gender assignment plays an important role in the syntax, similarly to the gender assignment of Polish. The gender is visible in the forms of nouns and agreement patterns between a head noun and various dependents within NP, such as articles and attributive adjectives (Huddleston and Pullum 2002), as in the examples:

- |               |              |             |
|---------------|--------------|-------------|
| 1. der Garten | ‘the garden’ | [masculine] |
| 2. die Wand   | ‘the wall’   | [feminine]  |
| 3. das Haus   | ‘the house’  | [neuter]    |

The level of gender grammaticalization is high, higher than in English, for instance. In the syntactic constructions, the antecedent and a personal pronoun occupy fixed positions, with noun as head, article as determiner, and adjective as modifier, and such agreement is strict in German (Huddleston and Pullum 2002). According to them, German shows three genders. The assignment is based to some extent on semantic rules and phonological rules.

Nouns denoting males and females are masculine and feminine. Moreover, there are many nouns denoting superordinate categories that are neuter, such as *Instrument* ‘instrument’ in contrast to *Gitarre* ‘guitar’ that is feminine, *Obst* ‘fruit’ and masculine *Apfel* ‘apple’, *Gemüse* ‘vegetable’ and feminine *Erbse* ‘pea’. Furthermore, nouns denoting colours are usually neuter, e.g. *das Pink* ‘pink’ or *das Orange* ‘orange’ (cf. Corbett 1991).

The masculine and feminine gender nouns comprise not only nouns that denote males and females, but also many inanimates whose gender cannot be predicted by their meaning. Therefore, the boundary should be established to distinguish between grammatical masculinity and femininity with semantic terms *male* and *female* (Huddleston and Pullum 2002). The majority of such cases are affected by morphological rules. The assignment requires inflectional agreement between a noun, adjectives, and articles (*der*, *die*, and *das* applying to masculine, feminine, and neuter gender respectively). In the case of German, a head noun is the source of agreement, while the dependent articles and adjectives work as a target. The target derives its gender from a noun (Corbett 1991). For instance:

warm-er Tee	warm-MASC tea
warm-e Milch	warm-FEM milk
warm-es Wasser	warm-NEUT water

The gender of a noun is usually marked in suffixes. According to Corbett, abstract nouns that are characterized by suffixes *-ung*, *-heit*, *-erei*, *-schaft*, and *-keit* are feminine, the plural ending *-(e)n* as well. In addition, nouns denoting occupations that refer to female representatives usually take the ending *-in*.

Finally, there are some phonological rules that govern the gender assignment. Corbett mentions the research that revealed that 64% of monosyllabic nouns are masculine. However, nouns ending in *-ur*, such as *Tür* ‘door’, are feminine de-

spite being monosyllabic, thus it can be said that morphological rules are superior and that the monosyllabic nouns are more likely to be masculine than not. In conclusion, the rules governing the German gender assignment overlap to a great extent.

Gender in the English language as a grammatical category plays a less important role in syntax than in languages such as Polish or German. English gender assignment is a semantic one, and gender is not an inflectional category. It is only reflected by personal pronouns *he/she/it*, and by the relative pronouns *who/which* that do not refer to the sex of nouns (Huddleston and Pullum 2002). The choice of a pronoun depends not on the form of a noun but it is determined by its reference (meaning).

The King declared <u>himself</u> satisfied	[masculine]
The Queen declared <u>herself</u> satisfied	[feminine]
The machine had switched <u>itself</u> off	[neuter]

According to Huddleston and Pullum (2002: 34), some linguists have argued that English is devoid of gender; however, the level of grammaticalization of the category is lower and gender in English is marked less strongly than in other languages.

Although gender is dependent on the semantic meaning of nouns and is visible only in the choice of pronouns, there are some exceptions to this rule. There are instances where the linguistic form of a noun restricts the choice of a pronoun. Huddleston & Pullum provide the following example of such a construction:

- a. The dog has lost his/its bone                      b. Fido has lost his bone

Both ‘the dog’ and ‘Fido’ refer to the same male referent; however, the second sentence has a proper noun that requires the usage of a masculine pronoun *he* and not a neuter pronoun *it*, which was possible in the first sentence.

Since the gender systems of various languages differ to a great extent, there seem to be many possible areas of difficulty for learners who acquire their second, third, and subsequent languages. The acquisition of multiple languages is complicated as there is an assumption that all languages are connected in the learner’s mind and they take part in the language production (whichever language is produced) (Jessner 2006). Moreover, the multilingual learners base their knowledge of L3 or other languages on their prior knowledge.

In the case of gender systems and the whole language systems, their acquisition may be affected by the influencing dominance of one language. As Jessner suggests, the language usually dominant appears to be of a higher position in the learner’s language catalogue or to be a native language, i.e. the language that is more significant in learner’s biography than others.

For the learners of languages with different gender assignments, the most problematic area seems to be the variety and complexity of morphological inflec-

tions that have to be remembered. In languages such as German, French, or Polish, the agreement patterns of nouns, articles, adjectives, verb forms require great attention and often cause difficulty. The main source of errors of English students of German, and vice versa, is the fact that English has a semantic gender assignment, 'a natural gender', and German gender assignment is heavily grammaticalized and the relationships between nouns and other parts of the sentence are different (Küfner 1969: 68). In English, gender is normally based on the meaning of a noun (the sex of a noun, *boy – he*) or the attitude towards it (*ship – she*), but in German the gender of particular nouns differs even when they have the same meaning (*der Wagen – das Auto*).

The common misunderstandings of English learners appear when target languages, such as Polish or German, have similar or identical gender labels. Since in German and Polish the labels are *masculine*, *feminine* and *neuter*, just as it is in English, the English speakers may believe that the gender distinction is based on sex differences (Küfner 1969: 68). Therefore, in their view, the nouns such as *spoon*, *fork*, or *knife* have 'sexes' like in other languages such as German or Polish. Such labeling and unpredictability of gender assignment cause many errors in learners' production.

Additionally, learners often have problems in distinguishing gender from declensional type of a noun (Corbett 1991). Moreover, Corbett mentions the area of difficulty in acquiring Polish gender assignment. In Polish, there are some inanimates exceptionally treated as grammatically animate (*banan*, *pech*, *mat*). For many learners such an exception can be a signal of the lack of distinction between animate and inanimate masculine gender and the learners may assign all of masculine nouns into the same animate category. A similar situation is observed with German noun *Mädchen* whose gender is determined by both semantic and morphological rules. The most agreements of the nouns are neuter but personal pronoun is usually feminine. There is a threat that the learners will extend this assignment rule over other nouns.

In conclusion, in languages such as Polish or German the gender is assigned in a way that the learner is not able to use a noun without knowing its gender (Küfner 1969), whereas in English the phenomenon is almost non-present. Since the gender assignments differ in their nature, the learners should overcome many obstacles before they acquire them perfectly. Many processes are involved in the multiple language acquisition; therefore, the field requires careful research that will reveal the relationships between all known languages and their mutual influence.

## **2. Research on perception of gender in multilinguals**

### ***2.1 Research aims and thesis***

Since the grammatical category of gender is still the most confusing for many linguists, the relation between complex gender systems of Polish and German,

and the reduced gender system of English in the process of acquisition seems to be a topic worthy of a thorough investigation.

The main aim of this research is to investigate to what extent L1 and L2 influence the perception and acquisition of the gender system of L3. Additionally, the research results should reveal if the languages with formal gender assignment have an impact on the language with a semantic gender assignment, i.e. whether particular nouns in Polish and German indicating gender by means of suffixes and articles determine the semantic rules of gender assignment in the English language.

The study aims to confirm or reject the following research thesis: Polish students of the German language incorrectly ascribe gender to English nouns as they transfer gender from their native language (Polish) and not from their second language (German).

Since the level of proficiency of German and English affects the subjects' answers, the present researchers intend to explore to what extent, if any, the learning setting and the frequency of using these languages affects the gender system acquisition. The research will also investigate the influence of any other foreign languages in the subjects' catalogue.

At this stage a point should be made that the authors are fully aware of research disputability. One can question the very aim of the research since the native speakers of English do not think about the English nouns in terms of their gender. The English nouns are neutral as a rule, with an exception made for the specific use of nouns such as when they are applied in personified expressions or they are used metaphorically. The intention of the authors is not to compare the responses of L3 learners of English and English native speakers who associate gender with its quite rare figurative use. The authors focus only on what happens in the mental lexicon of L3 learners. The issue of gender assignment is not treated here as a L3 learners' linguistic problem which may hinder in any way the process of acquisition. In fact, L3 learners do not even occupy their minds with the issue of gender assignment in the English language. The study pertains to a totally hypothetical situation in which the L3 learners acquiring English need to determine the gender of the English nouns.

Another problem that arises concerns gender assignment by L3 learners. Their choice of gender was restricted to neutral, masculine, and feminine; however in order not to force them to select one of the three options they were also informed on the possibility of leaving a blank space in gender selection chart. One may question a way in which the researchers determined whether gender assignment by the L3 learners in the study may be attributed to L1 or L2 transfer. Indeed, the source of transfer was entirely dependent on the subjective decision of the researchers.

## ***2.2 Research hypotheses and questions***

The researchers intended to check the following hypotheses:

- H0 – there is no negative transfer either from L1 or from L2 to L3.
- H1 – there is a negative transfer from L1 to L3.
- H2 – there is a negative transfer from L2 to L3

The research should provide the answers to the following research questions:

1. Do L1 and L2 have an impact on the perception of gender in L3?
2. Which language, L1 or L2, is the source of negative transfer in the acquisition of L3 gender system?
3. Does the formal type of a gender assignment of L1 and L2 influence the semantic gender assignment of L3?
4. Do other languages known by the subjects have an impact on the phenomenon?
5. Do the learning setting of L2 and L3, and the frequency and setting of the usage of L2 and L3 affect the gender acquisition?

### ***2.3 Research variables***

The concern of the research is the influence of the knowledge of Polish and German gender systems on the perception and acquisition of gender in the English language. The study assumes that there is a negative transfer in ascribing gender to nouns between these languages. Additional factor that may affect the results is the period of learning German and English, and the subjects' level of proficiency. The knowledge of gender systems of other languages familiar to the subjects may also influence the results. Additionally, the learning setting and the frequency and circumstances of using L2 and L3 are taken into consideration.

### ***2.4 Subjects***

89 students of the Department of German Studies at Higher Vocational School (PWSZ) in Nysa participated in the study. The subjects' native language is Polish, the second language is German, and the third is English. The research participants comprise the students of all three grades. They have all attended a three-year English course at PWSZ and 87% of them declare that they learned English before college education. The subjects declare that their period of learning German ranges from 7 to 21 years. Their competence in this language is described as very good (36%) and excellent (64%). 62% of the subjects have learned German in both formal and naturalistic setting, 35% only in formal, and the remaining 3% acquired German only in naturalistic setting. The subjects use the language every day for a few hours, and 73,5% of them use it outside the classroom in real-life communication and at work.

The period of learning the English language ranges from five months to 11 years. Their competence in English is described as poor, fair, and good. The research participants have learned English mostly in the classroom setting; only

8% acquired the language also in naturalistic setting. 62% of the subjects use English a few times in a year or month, the rest of them use it a few times a week. According to the questionnaire, only 18% of the students use English outside the classroom. 20% of the subjects have learned other foreign languages such as French, Russian, Spanish. Four participants had a short-time contact with Romanian, Chinese, Czech, and Latin. Additionally, one person declares the knowledge of the Silesian dialect, which is considered the subject's native language along with the standard Polish.

### ***2.5 Materials and procedure***

As the means of measuring the influence of L1 and L2 on the perception of gender in L3 the questionnaire was chosen. The questionnaire was divided into two parts. The first part comprised a questionnaire concerning the subjects' experience with foreign languages: the settings in which they learnt them, the length of learning, the frequency of using these languages, the circumstances in which the subjects used these languages, and finally the proficiency in all languages the subjects were familiar with.

The second part of the research involved filling in a test. A chart consisted of 93 common English nouns which are expected to be known by an elementary learner of English, and that frequently appear in everyday language. The nouns included names of animals, sports, abstract ideas, countable and uncountable nouns denoting food, days of a week, seasons, job titles, and common nouns connected with everyday life. The nouns referring to job titles were carefully selected to avoid the implication of gender of a referent. The remaining 83 nouns were chosen in terms of the difference between their gender and the type of gender assignment in Polish, German, and English.

The test required from the subject to assign gender to particular nouns by writing M (masculine), Ż (feminine), or N (neuter) next to each noun. The Polish language was used only in the instructions to each part of the questionnaire/test. To avoid the influence of Polish translation of unknown nouns during research procedure, the researchers prepared 30 flashcards with non-abstract nouns whose meaning could be unfamiliar to the subjects.

### ***2.6 Procedure and data analysis***

The researchers decided to test the subjects in groups of 8-12 students at the beginning of each class. Before testing, the participants were asked to sit individually to prevent them from consulting the answers. The students were given maximum 15 minutes to complete the above mentioned test and they were instructed that there were no correct or incorrect answers to these questions so there was no need of cheating. Moreover, they were asked to give spontaneous answers based on their intuition. The analysis of the results was based on measuring and comparing the subjects' gender assignments. The most frequent answers were compared to gender



of the nouns in Polish and German in order to check whether negative transfer occurs. The average proportion of answers indicating negative transfer from L1 to L3 and from L2 to L3 was to reveal which language is the source of interference. Answers that did not relate to any of these two languages were analysed by investigating the relationship between assigned gender and other foreign languages the subjects knew. Additionally, the relation between the learning period of German and English was analysed. The subjects were divided into three groups learning German for 7-11, 12-16, and 17-21 years, and three groups learning English for 1-3, 4-6, and 7-11 years. The percentages of their answers were compared in these groups. The relation between their proficiency, learning setting, usage setting, and frequency of using these languages were also examined.

## **2.7 Discussion of research results**

The results of the research are indicative of the negative transfer between Polish, German, and English. The analysis has shown that interference in gender assignment concerned all 83 English nouns (see appendix 1). The percentage of answers indicating interference (without analysing the sources of negative transfer) ranges from 60% to 100% (see Appendix 2). The research findings provide the evidence for L1 and L2 having a great impact on the production of L3 as they are deeply rooted in the learner's mind. Although the nouns were divided into several groups, no relation between the category of nouns and the percentages of interference in general was observed. The greatest amount of transferred answers appeared in the case of nouns such as *kangaroo*, *knife*, *sofa*, *castle*, *theatre*, *Internet*, *tennis*, *wine*, and *ice*. The proportion of interference ranges from 91% to 100%.

The subjects in the study transferred more frequently from L1 (50,7%) than L2 (29,1%). It is clearly visible when particular nouns are examined. They ascribed gender influenced by L1 in the case of 54 nouns and by L2 only in the case of 18 nouns. Two regularities can be observed in L2-L3 transfer. The nouns denoting popular sports (*football*, *basketball*) received one of the highest proportions of L2 interference. A similar situation can be noticed in the case of the nouns denoting days of the week. Although Polish *Wednesday*, *Saturday*, and *Sunday* are of feminine gender, more than 50% of research participants regarded them as masculine since all days of the week in German are of masculine gender. It is difficult to explain the situations in which the subjects assigned L2 masculine gender to *football* and *basketball*, and not to *volleyball*, which was described by the students as feminine. Polish possible colloquial names for these sports ('*noga*', '*kosz*', '*siatka*' respectively) did not clarify the subjects' choice. From the remaining 13 nouns (*chicken*, *room*, *flower*, *spoon*, *ball*, *taxi*, *chair*, *head*, *television*, *Internet*, *water*, *wine*, *ice*), the nouns *chicken*, *Internet*, and *ice* were ascribed L2 gender the most frequently.

To sum up, it may be asserted that these 18 nouns might have been the most common in German for the subjects and, therefore, their gender was intuitively chosen as the right domain for L3. Additionally, some semantic connotations might have been taken into account, e.g. feminine features of *flower*, neuter features of *ice*).

In 54 nouns indicating L1 as a dominant source of language interference, some L2 interference also may be observed. The noun *sofa* received the highest proportion of L1 interference. Other examples of such nouns are *coffee*, *milk*, *boxing*, *church*, *castle*, *beach*, *bicycle*, and *kangaroo*. These nouns are as common as nouns indicating L2 interference, so the subjects' choice cannot be clearly explained. The participants might have found them more strongly associated with their L1 or their proficiency in German did not allow them for L2 transfer. Another explanation of such results may be the subjects' own connotations of the features of particular gender in the case of some objects, e.g. *spoon* can be regarded as more feminine since it has delicate round shape in the opposition to sharp *knife*. In the case of nouns *taxi* and *umbrella*, the Polish colloquial terms for these objects (*taksówka* – taxi and *parasolka* – umbrella) appeared to be more dominant. Polish has two names for *umbrella*: *parasol* (masculine) and *parasolka* (feminine, colloquial use), and German has only one masculine form. Therefore, feminine gender assigned to the noun points to L1 as the source of interference. Similarly, a Polish word for *taxi* was initially the English borrowing *taxi* (masculine gender *taksi*), which declines a neuter noun. However, a more popular term for the object is *taksówka* (feminine, colloquial use) and, therefore, feminine gender may be justified in this case.

An interesting example is the noun *girl*. Its gender was described as feminine by almost all the subjects; only one person assigned neuter gender from L2 (*das Mädchen*). It cannot be treated, though, as a dominant interference from L1 since the noun denotes an animate referent with all the feminine features. In this example, like in many others referring to people, the semantic gender assignment prevails over the formal gender assignment. In the case of inanimate objects such as *book*, *chair*, the formal gender assignment is dominant.

Interestingly enough, the findings also showed that for some nouns the subjects assigned other genders than those implied by L1 or L2 use. When particular examples were analysed, it appeared that in the case of four nouns other gender was dominant over L1 and L2 (*fear*, *fatherland*, *time*, *autumn*). Although *fear* and *time* are masculine in Polish and feminine in German, the subjects ascribed to them neuter gender. It may be assumed that the reason for this choice was the abstract features of these nouns. However, gender of a noun *autumn* cannot be distinguished because the same number of subjects chose masculine, feminine, and neuter gender in L3. It is observed, therefore, that the noun has the features of all three genders. The noun *fatherland* is equally interesting. Despite feminine gender in L1 and neuter in L2, the masculine gender was assigned by the 50% of the research subjects. Two conclusions may be drawn; the students either associated the morpheme '*father*' with masculine features or their knowledge of English gender system was systematic enough to tell them that the noun is one of English exceptions with masculine gender.

The researchers included in the test other nouns that are exceptions in L3 (*winter*, *moon*, *ship*, *sun*, *death*, *fame*, and *luck*). The noun *ship* received 25% of answers assigning feminine gender. This high proportion shows that the subjects

might have been aware of the special treatment that beloved vehicles in England have, which is reflected in their feminine gender. This assumption seems to be confirmed by the relation between the proficiency in English the subjects declared and the results. Feminine gender was ascribed mostly by those students who declared their overall competence in English at B1/B2 and above this level.

In the case of *winter*, the relation between the proficiency in L3, its influence, and the German language is not clear. 40,5% of the subjects ascribed the noun masculine gender (the right gender in L3), however, its gender in L2 is also masculine, so the positive transfer from L2 cannot be excluded. The word *fame* underwent similar influence from L1; although the gender assigned by the participants is correct in L3 (feminine), it is identical to its gender in Polish. Additionally, a substantial number of answers indicative of L2 interference was observed in the case of noun *death*. Gender chosen by the subjects was feminine as in L1, nevertheless, 27% of the subjects chose masculine gender, which is correct for L3 and identical in L2. Again, it can be explained either by high competence in L3 or positive transfer from L2.

The nouns *luck*, *sun*, and *moon* indicate that in their case negative transfer from L1 and L2 is dominant over the subjects' knowledge of English. They were either aware of their gender in L3 or they ascribed Polish and German gender to them as right for L3. Gender of *luck* and *moon* was identical in L1 and L2, which is the source of gender chosen by the majority of the participants. Moreover, neuter gender assigned to the noun *sun* is clear evidence of L1 interference. Since the average proportion of answers indicating other source of influence than L1 or L2 was relatively high (~20%), it was clear that the relationship between these answers and other foreign languages subjects claimed to know should be investigated. Nevertheless, only in the case of one noun (*book*) such interference was observed. Three of four students who declared the knowledge of French assigned masculine gender to the noun regardless the fact that its gender is feminine in Polish and neuter in German. Interference in this example is interesting as the subjects claimed that their overall competence in French is poor. The reason for this choice and other answers not corresponding to L1 or L2 seems to be the random guessing or ascribing some features of genders to inanimate objects.

The research also investigated the influence of other factors that may have affected the subjects' choices. The comparison of average proportions of students' answers and the learning period of German show that the subjects' learning German for more than 17 years transferred gender significantly less from L1 and slightly more from L2, than students learning German for the shorter period. It may be assumed that the longer they are in contact with their L2, the more natural it becomes for them.

Moreover, the setting in which the subjects acquired their L2 has an impact on the phenomenon as well. It turned out that the highest proportion of interference from L1 and the smallest from L2 appears among those students who learned German in the formal setting in the classroom. The proportion of answers among subjects who acquired German in naturalistic setting is very different; the

rate of L1 interference was 25% lower and the interference from L2 was significantly higher than L1. Furthermore, the participants who declared using German not only in the classroom setting but also in real-life communication, provided smaller number of answers indicative of negative transfer from L1 and slightly greater negative transfer from L2. It may also bear witness to the fact that the more natural contact with the real language, the more unconscious influence of this language upon the production of L3.

This assumption is also proved by the relationship between the frequency of using L2 and the proportion of interference. Similarly, as in the situation above, the subjects who speak German every day transfer less from L1 and more from L2. Finally, the overall competence in German also confirmed this tendency. In this case, the results revealed that the more proficient the subjects are in L2, the higher proportion of answers indicating L2 interference.

When the English language was investigated in a similar way, it surprisingly turned out that the more the subjects are proficient in L3 and the more naturalistic setting of learning and usage of this language, the lower proportion of L2 interference and significantly higher of L1 interference. The frequency of using L3 and the subjects' overall competence in the language confirmed this tendency. It can be concluded that the high proficiency in L3 and naturalistic conditions of acquiring and using the language have led to equalization of the status of L2 and L3 in the learner's mind. The German language could become an equivalent language to English; therefore, when assigning gender to the English language, the subjects refer to their native language.

Additionally, the test included some job titles to check the relation between the languages in the study and gender of nouns denoting human referents. Some popular job titles were chosen (*doctor, dentist, teacher, writer, actor, politician, director, police officer, artist, and learner*). Both Polish and German have masculine and feminine forms of these nouns referring to people of both sexes. The English language most frequently has one form for a job title (e.g. *teacher, doctor, politician, director*), but there are some nouns with feminine equivalents (e.g. *actor/actress*). The research revealed that all of the nouns were assigned masculine gender. The proportion of answers indicated that more than 80% of subjects regarded those jobs masculine. The subjects seemed not to transfer gender as grammatical category but rather decided whether each noun is 'male' or 'female' occupation. The fact that over 90% of subjects regard the nouns *politician* and *police officer* as masculine, results from the awareness that formerly only men got these jobs. Similar tendency is observed in the case of the nouns *doctor, dentist, and director*. Although nowadays both men and women take these jobs, the research results showed that the subjects still think of some occupations in a stereotypical way.

Moreover, the noun *actor* also received high proportion of masculine assignment; however, in this situation the subjects may consider the noun masculine in opposition to its feminine form *actress*, which is in use. Only the proportions of answers of nouns *teacher, artist, and learner* were different. The subjects decided that these nouns refer to a greater extent to females. It can be explained by the

fact that a *learner* is equally male and female, and that in Poland women work as teachers more frequently than men. The noun *artist* is regarded male and female.

### ***2.8 Conclusions and limitations of the study***

The research proved the research thesis, which stated that L1 is the source of the interference in L3 gender perception and acquisition. However, it revealed that L2 acts as a significant source of interference as well, and that the differences in proportion of negative transfer from L1 and L2 are relatively small. Interference from L2 turned out to increase proportionally to the learning period and overall competence in L2. L1 turned out to dominate the learner's language catalogue in these cases where the subjects declared lower level of proficiency in L2 and formal setting of learning and using the language. Additionally, the research displayed that the overall competence in L3 is also significant as the high proficiency in L3 deprives L2 of its status of a second language and becomes of equal importance in learners' mind as L2. Moreover, it turned out that the awareness of English gender arises along with the development of English proficiency; therefore, interference can be regarded as the transitional stage in the acquisition of gender. Undoubtedly, as it has been mentioned in the empirical part, one may question the methodology applied for the purpose of the research. In many cases it was difficult to indicate objectively the source of transfer. In other situations such as the one in which the respondents were to assign gender to the nouns related to professions, the subjects were simply not given a chance to give two genders as it is the case with dual gender nouns (e.g. *actor/actress*). The authors are aware that the current study presents only hypothetical conclusions and there is a need to introduce a more adequate research methodology in the future research.

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### Appendix 1: The research results: perceived gender of L3 (English) by Polish learners with L2 (German) experience

Noun	Gender in Polish	Gender in German	Perceived gender in English (Subjects' average answer)
1. a cat	masculine	feminine	masculine
2. a chicken	masculine	neuter	neuter
3. a frog	feminine	masculine	feminine
4. a fish	feminine	masculine	feminine
5. a kangaroo	masculine	neuter	masculine
6. a monkey	feminine	masculine	feminine
7. a rat	masculine	feminine	masculine
8. a tree	neuter	masculine	neuter
9. a room	masculine	neuter	neuter
10. a flower	masculine	feminine	feminine
11. a girl	feminine	neuter	feminine
12. a ship	masculine	neuter	masculine
13. an umbrella	masculine/feminine	masculine	feminine
14. a bicycle	masculine	neuter	masculine
15. a plane	masculine	neuter	masculine
16. a mirror	neuter	masculine	neuter
17. a knife	masculine	neuter	masculine
18. a spoon	feminine	masculine	masculine
19. a fork	masculine	feminine	masculine
20. a game	feminine	neuter	feminine
21. a toy	feminine	neuter	feminine
22. a sofa	feminine	neuter	feminine
23. a song	feminine	neuter	feminine
24. a cigarette	masculine	feminine	masculine
25. a problem	masculine	neuter	masculine
26. a beach	feminine	masculine	feminine
27. a river	feminine	masculine	feminine
28. a castle	masculine	neuter/feminine	masculine
29. a ball	feminine	masculine	masculine
30. a theatre	masculine	neuter	masculine
31. a taxi	feminine	neuter	neuter
32. a church	masculine	feminine	masculine
33. a sky	neuter	masculine	neuter
34. a star	feminine	masculine	feminine
35. a book	feminine	neuter	feminine
36. a house	masculine	neuter	masculine
37. a chair	neuter	masculine	masculine
38. a bank	masculine	feminine	masculine
39. a mouth	feminine	masculine	feminine
40. a leg	feminine	neuter	feminine
41. a head	feminine	masculine	masculine
42. a university	masculine	feminine	masculine

<b>Noun</b>	<b>Gender in Polish</b>	<b>Gender in German</b>	<b>Perceived gender in English (Subjects' average answer)</b>
43. television	feminine	neuter	neuter
44. Internet	masculine	neuter	neuter
45. football	feminine	masculine	masculine
46. basketball	feminine	masculine	masculine
47. volleyball	feminine	masculine	feminine
48. tennis	masculine	neuter	masculine
49. hockey	masculine	neuter	masculine
50. boxing	masculine	neuter	masculine
51. fear	masculine	feminine	neuter
52. world	masculine	feminine	masculine
53. death	feminine	masculine	feminine
54. fatherland	feminine	neuter	masculine
55. fame	feminine	masculine	feminine
56. luck	neuter	neuter	neuter
57. sun	neuter	feminine	neuter
58. moon	masculine	masculine	masculine
59. time	masculine	feminine	neuter
60. milk	neuter	feminine	neuter
61. water	feminine	neuter	neuter
62. wine	neuter	masculine	masculine
63. sauce	masculine	feminine	masculine
64. ice	masculine	neuter	neuter
65. coffee	feminine	masculine	feminine
66. tea	feminine	masculine	feminine
67. a banana	masculine	feminine	masculine
68. a potato	masculine	feminine	masculine
69. a tomato	masculine	feminine	masculine
70. an apple	neuter	masculine	neuter
71. butter	neuter	feminine	neuter
72. salt	feminine	neuter	feminine
73. Monday	masculine	masculine	masculine
74. Tuesday	masculine	masculine	masculine
75. Wednesday	feminine	masculine	masculine
76. Thursday	masculine	masculine	masculine
77. Friday	masculine	masculine	masculine
78. Saturday	feminine	masculine	masculine
79. Sunday	feminine	masculine	masculine
80. winter	feminine	masculine	feminine
81. spring	feminine	masculine	feminine
82. summer	neuter	masculine	neuter
83. autumn	feminine	masculine	feminine/neuter

**Appendix 2: The percentage of answers indicating interference from L1 and L2 (brackets represent gender identical to gender in L3)**

<b>Noun</b>	<b>% of answers indicating Polish interference</b>	<b>% of answers indicating German interference</b>
a cat	59,4	21,6
a chicken	32,4	48,6
a frog	43,2	32,4
a fish	59,4	24,3
a kangaroo	70,2	27
a monkey	43,2	29,7
a rat	54	10,8
a tree	64,9	24,3
a room	45,9	48,6
a flower	35,1	51,4
a girl	(98,9)	1,1
a ship	45,9	27
an umbrella	64,9	18,9
a bicycle	67,6	16,2
a plane	48,6	40,5
a mirror	64,9	21,6
a knife	70,2	24,3
a spoon	38,9	47,2
a fork	51,4	32,4
a game	56,7	18,9
a toy	35,1	32,4
a sofa	81	13,5
a song	51,4	24,3
a cigarette	56,8	27
a problem	54,1	41
a beach	75,7	10,8
a river	52,8	30,6
a castle	78,4	21,6
a ball	37,8	43,2
a theatre	56,8	35,1
a taxi	32,4	43,2
a church	68,6	17,1
a sky	55,9	32,4
a star	51,5	31,4
a book	48,6	17,1
a house	62,9	31,4
a chair	37,1	42,9
a bank	58,3	22,2
a mouth	38,8	22,2
a leg	40	25,7
a head	33,3	44,4



<b>Noun</b>	<b>% of answers indicating Polish interference</b>	<b>% of answers indicating German interference</b>
a university	57,1	22,9
television	37,1	40
Internet	40	54,3
football	20	57,1
basketball	31,4	48,6
volleyball	42,9	37,1
tennis	62,9	31,4
hockey	60	28,6
boxing	68,9	25,7
fear	34,3	42,9
world	54,3	20
death	48,6	(25,7)
fatherland	25	25
fame	(47,1)	23,5
luck		71,4
sun	(60)	20
moon		55,9
time	25,7	17,1
milk	70,6	8,8
water	40	42,9
wine	44,1	47,1
sauce	59,5	24,3
ice	43,2	48,6
coffee	67,6	18,9
tea	64,9	16,2
a banana	56,8	24,3
a potato	64,9	13,5
a tomato	55,6	16,7
an apple	54,1	29,7
butter	59,5	2,2
salt	42,9	25,7
Monday		78,4
Tuesday		75,7
Wednesday	24,3	59,5
Thursday		73
Friday		81,8
Saturday	32,4	54,1
Sunday	35,1	51,4
winter	43,2	(40,5)
spring	45,9	18,9
summer	48,6	24,3
autumn	33,3	33,3
average % of answers indicating interference	50,7	29,1

### Appendix 3: Gender of job titles assigned in the study

<b>Noun</b>	<b>Masculine</b>	<b>Feminine</b>
a doctor	88,8%	11,2%
a teacher	71,9%	28,1%
a dentist	87,6%	12,4%
a writer	76,5%	23,5%
a actor	83%	17%
a politician	91%	9%
a director	89,9%	10,1%
a police officer	92,1%	7,9%
a artist	68,5%	31,5%
a learner	60,7%	39,3%

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