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The Use of the Generic Masculine, the Derivational Suffix -*in* and Gender-Fair Innovations in Unrehearsed Spoken Dialogue in Modern Standard German

ABSTRACT

The second-wave feminist movement and the publication of the *Richtlinien zur Vermeidung sexistischen Sprachgebrauchs* catalyzed the rise of many gender-fair innovations in Modern Standard German (Guentherodt et al. 1980). While multiple studies have shown that gender-fair innovations such as the *Paarform* 'pair form' are used frequently in written and formal language (Bußmann & Hellinger 2003; Castillo 2003; Moser & Hannover 2014), little empirical research has addressed their use in unrehearsed, spoken dialogue. This study investigates the frequency of the generic masculine, the derivational suffix -*in* and gender-fair innovations in unrehearsed spoken dialogue in Modern Standard German.

1. Introduction

In the last 50 years some feminists have accused the German language of being linguistically androcentric (Trömel-Plötz 1978; Guentherodt et al. 1980; Schoenthal 1989; Hellinger 1990; Grabrucker 1993), which has brought about a variety of innovative ideological change. However, many of these innovations function only in written language since many are typographic, not oral, conventions. While a plethora of research has been conducted on the use of gender-fair written language in Modern Standard German,[1] little research has been carried out regarding its frequency in unrehearsed spoken dialogue. Written and

spoken language are two disparate means of communication. Therefore, the use of gender-fair language in writing is not necessarily the same for the spoken variety. When writing, speakers of a language typically have more time to consciously think about what they intend on writing and also have the ability to edit or modify their text, whereas in spoken unrehearsed dialogue speakers do not have this luxury. Given that these gender-fair innovations were imposed on the language by some feminists and organizations, and that generally they take longer to produce, it is possible that in unrehearsed spoken dialogue, particularly in informal speech, speakers are less likely to use the gender-fair innovations than in written language.

The present study investigates the frequency of the generic masculine, the derivational suffix -*in*, and gender-fair innovations in unrehearsed spoken dialogue in Modern Standard German. Section 2 lays out the theoretical framework by providing a brief overview of the grammatical gender system of Modern Standard German and previous research on the cognitive representation of the generic masculine and gender-fair innovations. Following this discussion, a summary of the gender-fair ideological change which has occurred in the language within the last 50 years is provided. Section 3 describes the design and procedure of an observational study which was carried out on 30 native speakers of Modern Standard German which sought to observe the frequency of the generic masculine in comparison to gender-fair forms in unrehearsed, spoken dialogue. Section 4 provides the results of the study, which are subsequently explained and discussed in Section 5. Section 6 presents a summary of the findings.

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2. Theoretical Issues

2.1 German Gender System

In Modern Standard German inanimate nouns are assigned to one of three grammatical genders (masculine, feminine or neuter). However, due to the traditional bipartite gender view of the world, most speakers of Modern Standard German refer to animate nouns using only the masculine or feminine. There are a few exceptions to this bipartite division of gender; namely with lexical items such as *das Mädchen* 'girl' which are grammatically neuter. Nonetheless, in such contexts speakers tend to use biological sex rather than grammatical gender (for more information, see Oelkers 1996). If speakers do use the neuter to refer to human referents out of reasons other than grammatical gender, they do so for socially complex reasons, such as identifying as agender.

However, when referring to a group of mixed-sex referents, speakers often make use of the generic masculine. The generic masculine refers to the linguistic convention whereby the morphological masculine form of a word is used to refer to both sexes. This use can appear in both the plural, as in (1), or the singular, as in (2). In both of these instances the referent(s) can be male, female or a mix of both.

(1) die   Schüler   sind   im   Klassenzimmer

     DEF-PL   students-MASC-PL   PRS-PL   in.ART.SING   classroom.SG

     'the students are in the classroom'

(2) der   Schüler   soll   fleißig   sein

    DEF-M-SG student-MASC-SG PRS-SG ADJ   INF

    'the student should be hard-working'

An animate noun denoting a female referent can be formed from an animate noun denoting a male referent by affixing the derivational suffix -*in*, which indicates that the biological sex of the referent is female, such as *Lehrerin* 'female teacher'. In the plural, this suffix becomes -*innen*, as in *Lehrerinnen* 'female teachers'. However, the masculine plural word form has a null morpheme marker, i.e., *Lehrer* + ø, which is also used as the generic form to refer to a mixed-sex group. Therefore, the word form *Lehrer* is ambiguous as it can mean male teacher, male teachers, or male and female teachers. Table 1 provides a visual summary of the gender paradigm for strong nouns in Modern Standard German.

Table 1. Gender Paradigm for Strong Nouns

	Singular	Plural
Masculine	*Lehrer*	*Lehrer* + Ø
Feminine	*Lehrer* + *in*	*Lehrer* + *innen*

Due to the semantic view, according to which the generic masculine does not overtly mark female referents morphologically,[2] some feminists have objected to its use (Trömel-Plötz 1978; Guentherodt, et al. 1980; Schoenthal 1989; Hellinger 1985; Grabrucker 1993). Luise F. Pusch, a feminist linguist, published a cornucopia of literature regarding the claim that the German language is

morphologically androcentric. In her 1984 publication *Das Deutsche als Männersprache* she demonstrates, often quite satirically, why, in her opinion, the German language morphologically favors the male sex over the female sex. In her publication of *Die Frau ist nicht der Rede wert* she epitomizes this issue with the statement, "99 Staatsbürgerinnen und ein Staatsbürger sind auf Deutsch 100 Staatsbürger" '99 female citizens and one male citizen, in German, are 100 male citizens' (Pusch 1999: 10). Therefore, the presence of one male makes the whole NP morphologically masculine.

The question of whether the use of the generic masculine actually affects the mental representation of the sex of referent(s) is linked to the notion of linguistic relativism, according to which one's language, or in this case, the way in which one's language is used, may affect thought (Whorf 1956). This is central to some feminists' demand for the necessity of ideological change and the rejection of the generic masculine. How speakers interpret utterances of the generic masculine in the German language has been a topic of much empirical research within the last 30 years (Klein 1988; Hamilton 1988; Hamilton, Hunter & Stuart-Smith 1992; Scheele & Gauler 1993; Irmen & Köhncke 1996; Braun et al. 1998; Rothermund 1998; Heise 2000; Irmen & Kaczmarek 2000; Stahlberg & Sczesny 2001; Rothmund & Scheele 2004; Stahlberg et al. 2007; Irmen & Schumann; 2011; Formanowicz et al. 2013; Köser et al. 2015; Sczesny et al. 2016).[3] These psycholinguistic studies have shown that the use of the generic masculine in Modern Standard German does indeed trigger more associations of male referents than female referents. Furthermore, they have shown that the use of gender-fair language results in more associations of female

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referents. These results thus confirm most of the claims made by "feminist language critics" (Braun et al. 2005: 17).

However, as Braun et al. point out (*ibid*.), these results are not always the same for all speakers, as the cognitive representation also depends on speakers' attitudes (also see Hamilton 1991; Stahlberg & Sczesny 2001; Cralley & Ruscher 2005). The context and the knowledge speakers have about the social norms and stereotypical gender roles are also important factors regarding this mental representation (see Braun et al. 1998; Irmen & Roßberg 2004; Rothmund & Scheele 2004; Becker 2008; Gygax et al. 2008). Furthermore, just because speakers use the generic masculine does not necessarily mean that they are intentionally trying to be sexist (Stahlberg et al. 2007: 167). One of the main reasons why many forms in Modern Standard German are "androcentric" is due to the morphological history of the language itself and not so much the intention of individual speakers. For example, the agentive suffix -*er* was borrowed from Latin -*ārius*, which was *āri* (masculine, *ja*-stem) in OHG (Old High German). Therefore, the agentive suffix -*er* is by its very nature masculine. The fact that plurals such as *die Lehrer* 'the teachers-MASC' are "androcentric" is, from a historical perspective, an artifact of the grammatical structure of OHG.[4] As Fischer points out, the (morphological) structure of a language has a large influence on one's use of gender (2004: 189) and given that speakers acquire the generic masculine when they acquire the language, it is only natural that they would use it in speech—particularly in speech which is unrehearsed.

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2.2 Ideological Change and Gender-Fair Innovations

The 1980s publication of the *Richtlinien zur Vermeidung sexistischen Sprachgebrauchs* was hugely influential on the gender-fair ideological change which has taken place in Modern Standard German over the last 50 years. The article presented a set of prescriptive guidelines to be followed to avoid sexist language (Guentherodt et al. 1980: 15–21). One of the suggestions was the replacement of the generic masculine with what is known today as the *Paarform* 'the pair form'. This *Paarform*, also called *Beidenennung* and *Doppelnennung* 'both/ doubling naming', describes the syntactic structure whereby two nouns of different genders are included in the np to avoid linguistic gender bias when there is a contrast in sex, i.e., *Lehrerinnen und Lehrer* 'female and male teachers'. By using this np structure, both the feminine and masculine plural forms of the noun are used, which is an attempt at improving the linguistic visibility of female referents. The *Paarform* is now frequently used in formal spoken dialogue and written language, especially in official documentation and rhetoric (Albrecht 2000; Bußmann & Hellinger 2003; Mucchi-Faina 2005; Schweizerische Bundeskanzlerei 2009; Merkel 2011; Lamb & Nereo 2012). Nonetheless, the generic masculine is still pervasive in written language and textbooks (Lindner & Lukesch 1994; Preinsberger & Weisskircher 1997; Bußmann & Hellinger 2003; Castillo 2003; Markom & Weinhäupl 2007; Moser & Hannover 2014).

Prior to the feminist movements in German-speaking countries, job advertisements commonly advertised positions using the generic masculine such as *Journalist gesucht* 'looking for journalist-MASC', which due to the linguistic ambiguity of gender, may have given

women the impression that they could not apply. Job advertisements also read *Sekretärin gesucht* 'looking for secretary-FEM', which may reveal an overtly sexist societal view; that is, only women should be secretaries.

Several studies have confirmed these cognitive effects (Bem & Bern 1973; Stout & Dasgupta 2011; Vervecken et al. 2013). However, in a study carried out in 2003, Castillo found that in newspaper job advertisements the *Paarform* was the most frequently used linguistic tool to avoid linguistic gender bias. This increase in its usage shows its gradual acceptance over the last 50 years (207).[5] It is worth noting, however, that the question of androcentric language has a history which extends back thousands of years, and Germanic languages have employed gender-neutral strategies at many points in their histories. For example, OHG (Old High German) used the neuter *zwei* 'two' to refer to a male and female, as opposed to the masculine *zwene* or feminine *zwō* (Wright 1888: 18). There are also words which today have only one gender form, but previously had two, such as OHG *frō* 'lord' and *frouwa* 'woman' (das Herkunftswörterbuch: Dudenredaktion: 300). In Modern Standard German, this word is just *Frau* 'woman'. However, the word *Fronleichnam* 'lord's body' (*Corpus Christi*) is a NHG (New High German) retention. While a great deal of ideological change was catalyzed by feminist arguments in the last 50 years, there were earlier attempts at creating gender-fair and neutral language in earlier stages of the language.

One of the practical issues with the *Paarform* is that it takes longer to produce, and it is linguistically more economical to use the generic masculine. In 2011, I attended a symposium at the University of Leipzig where the introductory speaker opened by making a verbose,

yet common, salutation (3), which demonstrates the extent to which the *Paarform* elongates speech. Using such linguistically-encompassing language is common in formal spoken [scripted] dialogue when addressing an audience. It is possible, therefore, that the use of the *Paarform* is register-specific, and may not appear as frequently in informal and unrehearsed spoken dialogue, which is a central question of the present study.

(3) "Meine Damen und Herren, liebe Kolleginnen und Kollegen, Freundinnen und Freunde, Professorinnen und Professoren, Lehrerinnen und Lehrer, Dozentinnen und Dozenten, das Kollegium, Studentinnen und Studenten, ich möchte Sie herzlich bei dieser Konferenz willkommen heißen".

'Ladies and Gentlemen, female colleagues and male colleagues, female friends and male friends, female professors and male professors, female teachers and male teachers, female lecturers and male lecturers, the faculty, female students and male students, I would like to give you a warm welcome to this conference.'

Another relatively new gender-fair innovation is the use of substantivized participial or adjectival forms, such as *die Studierenden* 'the ones who study'. By using these substantivized forms, the derivational suffix -*in*, which according to some feminists is problematic (Pusch 1984: 59; Schoenthal 1989: 301), is not used to indicate whether a referent is female, since the forms are gender-neutral. This nominalization of participles and adjectives has become productive in Modern Standard German and can be applied to most verbs and adjectives. There are also a number of typographic conventions which have come to be used frequently in written language

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to improve the visibility of female referents. One of these is the so-called *Binnen-I*. This convention capitalizes the grapheme <i> in the suffix *-in*, creating *-In*; allowing two word forms, which have different grammatical genders, such as *Lehrer* 'male teachers' and *Lehrerinnen* 'female teachers', to be written together, as in *LehrerInnen*. Studies have shown that the use of the *Binnen-I* evokes more mental images of women (Scheele & Gauler 1993; Heise 2000; Stahlberg & Sczesny 2001; Rothmund & Scheele 2004). Using this convention also saves space on paper but moreover does not hinder comprehension, as speakers realize that the capitalization of the grapheme represents the start of a new word boundary, but also a morphological continuation of the previous word form. The affixation of the graphically lower case *-in*, however, can only be feminine (Scott 2006: 162). Some other typographic innovations which speakers of Modern Standard German currently have at their disposal are reported in (4)—(8).

(4)   The use of the *Schrägstrich* 'forward slash' as in *Lehrer*/*innen*

(5)   The use of the *Bindestrich* 'hyphen' as in *Lehrer-innen*

(6)   The use of the *Klammern* 'parentheses' as in *Lehrer*(*innen*)

(7)   The use of the *Unterstrich* 'underscore' as in *Lehrer_innen*

(8)   The use of the *Genderstar* 'asterisk' as in *Lehrer*innen*

Typographically these conventions have been proposed as a solution to the issue of the linguistic invisibility of women. The *Genderstar* makes use of the asterisk between a masculine word form and the suffix *-in* such as *Lehrer*in* or *Lehrer*innen*. This typographic convention is an attempt to include the speakers who identify themselves as transgender or anything but the male or female binary. While these conventions, i.e., (4)—(8), are used frequently in written

language, they do not function effectively in spoken dialogue, given that there is no effective and uniform way of pronouncing them. Durrell (2006: 6) suggests a pronunciation change to differentiate *-in* [iː] from the lax *Binnen-I* [ɪ], but few speakers do this in naturally-occurring speech and is generally reserved for the use of feminists. Another approach which has been taken up by some feminists, but not all, is to insert a glottal stop [ʔ] to break up the word boundaries.

2.3 Research Gap

It is evident that the use of gender-fair language has increased in written and formal spoken dialogue in Modern Standard German over the last 50 years (Bußmann & Hellinger 2003; Castillo 2003; Moser & Hannover 2014), but little empirical research has quantified the extent to which these innovations are also used in unrehearsed spoken dialogue. In an unpublished pencil-and-paper study, Moser (2008) investigated register as a variable but did not address the important difference between written and spoken language. Furthermore, responses were elicited through the written medium only and speakers were asked to fill in the gap in a written sentence. Spoken and written language are two disparate means of communication and spontaneous speech is different from prepared speech. Therefore, one might expect there to be a difference in frequency in unrehearsed spoken dialogue. Given that the *Paarform* takes longer to produce than the generic masculine and given that the typographic conventions are difficult to utter orally, one would expect gender-fair innovations to be used less frequently in spontaneous spoken dialogue. However, empirical evidence is needed to quantify the extent to which this is true.

Furthermore, it is unclear whether the age and the sex of the speaker are social factors which influence the linguistic decision to use the generic masculine, the suffix *-in* and gender-fair innovations. In his 2001 publication *Principles of Language Change*, Labov observed that "women conform more closely than men to sociolinguistic norms that are overtly prescribed, but conform less than men when they are not" (Labov 2001: 293). In other words, female speakers have a tendency to use progressive innovations more frequently than male speakers. Therefore, according to this observation, female speakers of Modern Standard German ought to use gender-fair innovations more frequently than male speakers. However, again no empirical evidence confirms the validity of this observation for the use of gender-fair innovations in unrehearsed spoken dialogue in Modern Standard German. The majority of the previous scholarship on gender-fair language and the generic masculine in Modern Standard German has focused either on their frequency in written and formal spoken language, or on the cognitive representation of using such forms. The present study aims to bridge this gap in research.

3. Methodology

3.1 Research Questions and Hypotheses

Based on the comments and literature reviewed in Section 2, three research questions and three hypotheses were proposed.

(9) a.   How frequently are gender-fair innovations used in unrehearsed spoken dialogue in Modern Standard German?

b.   How frequently is the derivational suffix *-in* used in unrehearsed spoken dialogue in Modern Standard German in comparison to the frequency of the generic masculine?

    c. Is the use of the generic masculine, the derivational suffix -*in* and gender-fair innovations sensitive to the social factors age and sex?

(10) H_1: Speakers use the generic masculine more frequently than -*in*(*nen*) forms due to linguistic economy.

H_2: The derivational suffix -*in*, which indicates that an animate noun is female, is only used when it is pragmatically necessary for the speaker to provide extra descriptive information.

H_3: The age and the sex of the speaker are social factors which influence the linguistic decision to use the derivational suffix -*in*.

3.2 Design

25 images were chosen for this study (see Appendix 1).[6] An example image, which was used to elicit a response, can be seen in Figure 1. Nineteen of the images were deliberately chosen to elicit a response using eight lexical items which were tested (see Table 2). The remaining six images were distraction images which were added to sway participants from becoming aware of the objective of the study. Naturally, as soon as speakers become aware of what is being investigated, they may consciously or unconsciously change their response. Given that the goal of the study was to analyze natural, unprepared speech, eliciting an unrehearsed non-prescriptive response from speakers where possible was essential. Since speakers' realization of the lexical item may depend upon the sex of the referents and number of referents, the images were deliberately chosen to elicit a response using the lexical items in each of the four conditions (11).

(11) (a)   male singular referent

  (b)   female singular referent

  (c)   mixed-sex plural referents (i.e., a group of male and females)

  (d)   female-only referents

Figure 1. *Image R- Two Female Selfie-Takers*

While the speakers were not aware of the lexical items which were being tested, the images were chosen in such a way that they would elicit a response using those lexemes. For instance, speakers were shown an image of a female teacher in a classroom, which would therefore elicit a response using the German word for teacher [+fem, +sing]. These lexical items were chosen because they are common nouns which are part of speakers' daily repertoire. Therefore, the lexical items were common enough that speakers would ideally use them to describe the images with which the speakers were presented.

Moreover, these lexical items were chosen because of their morphological structure. To test whether morphology plays a role, lexical items with the suffixes -*er*, -*ist*, -*ion* and -*ent* were chosen. Furthermore, lexical items 7 and 8 were coined to test the frequency of the generic masculine and the suffix -*in* with innovations which speakers had never encountered before. Items 7 and 8 were therefore nonce words insofar as they do not exist in the language, but relevant and realistic enough that speakers would have no difficulty in understanding their definitions and in using them in unrehearsed speech.

Table 2. The Lexical Items

	Lexeme	Meaning
1	*Schüler*	pupil
2	*Lehrer*	teacher
3	*Tourist*	tourist
4	*Spion*	spy
5	*Bundeskanzler*	chancellor
6	*Präsident*	president
7	*Selfiemacher*[7]	'a selfie-taker'
8	*Iphoner*	'an iPhoner'

3.3 Participants

30 native speakers of Modern Standard German were recruited for this study (15 male and 15 female) between the ages of 11-80.[8] To recruit the participants, stratified random sampling was carried out so that the

effects of the factors age and sex could be examined. Therefore, each age group consisted of three male and three female participants (see Table 3). 67% of the native speakers came from *Niedersachsen* 'Lower Saxony', 30% of the native speakers came from other German *Bundesländer* 'federal states'. Only one native speaker came from a German-speaking country other than Germany, which was Switzerland.

The first three age groups (11–12, 13–15, 16–18) were chosen with such precision because for these age groups the study was conducted in a German *Haupt-und Realschule* 'middle and high school'. Therefore, a school was selected and then stratified random sampling was conducted within the school. The age groups thus reflect the grades which the students were in. The remaining two age groups (19–39 and 40+) are much broader in age difference due to the difficulty of recruiting speakers of such specific ages to participate in the study (such as 33–34, 35–36, 37–39 etc). In schools, however, due to the high concentration of students of particular age groups, it is possible.

Table 3. Participant Breakdown

Age Range	Total Number of Male Participants	Total Number of Female Participants	Total Number of Participants
11–12	3	3	6
13–15	3	3	6
16–18	3	3	6
19–39	3	3	6
40+	3	3	6
TOTAL	15	15	30

3.4 Procedure

After signing the relevant IRB permission forms, participants were individually taken to a quiet place to conduct the study. Given that group studies could result in speakers being influenced by the responses of other speakers, the study was conducted one-on-one, (with just the participant and the investigator). Speakers were then presented with the 25 images, one at a time, and were asked to describe them. Each time the study was conducted, the images were counterbalanced and rearranged in a random order to ensure the naturalness and authenticity of the tokens. During the study, the two nonce words *Selfiemacher* 'selfie-taker' and *Iphoner* 'iPhone user' were explained and defined to the participants. The script can be seen in (12). Then the speakers were asked to describe the appropriate images (images L-S) using the two nonce words. These were images of people taking selfies and using their iPhone. The study lasted approximately 10 minutes in total.

(12) "Viele Wörter kommen jeden Tag in die deutsche Sprache hinein. Jetzt erfinden wir zwei neue Wörter in diesem Zimmer: ein Selfiemacher und ein Iphoner (also Iphone, mit 'r' am Ende). Ein Selfiemacher ist jemand, der ein Selfie macht und ein Iphoner ist jemand, der ein Iphone benutzt."

'Lots of words enter the German language every day. Now we're going to coin two new words, right here in this room: a selfie-taker and an *iPhoner* (that's iPhone, with an 'r' on the end). A selfie-taker is someone who takes a selfie and an *iPhoner* is someone who uses an iPhone'

4. Results

4.1 Frequency Tables

Table 4. Frequency of the Derivational Suffix *–in* in Unrehearsed Spoken Dialogue

No.	Lexeme	Singular						Only Female Referents	
		Female Singular Referent		Male Singular Referent		Mixed-Sex Referents			
		Raw	NF	Raw	NF	Raw	NF	Raw	NF
1.	*Lehrer*	30/30	100.0	0/30	0.0	0/30	0.0	28/30	93.333
2.	*Schüler*	30/30	100.0	0/30	0.0	1/30	3.3	24/30	80.0
3.	*Tourist*	N/A[10]	N/A	N/A	N/A	0/13	0.0	0/13	0.0
4.	*Spion*	30/30	100.0	0/30	N/A	N/A	0.0	N/A	N/A
5.	*Bundeskanzler*	30/30	100.0	0/30	N/A	N/A	0.0	N/A	N/A
6.	*Präsident*	30/30	100.0	0/30	N/A	N/A	0.0	N/A	N/A
7.	*Selfiemacher*	30/30	100.0	0/30	0.0	0/30	0.0	0/30	0.0
8.	*Iphoner*	30/30	100.0	0/30	0.0	0/30	0.0	5/30	16.67
	Arithmentic Mean	100%		0%		0.75%		42.85%[9]	

Table 5. Frequency of the Generic Masculine in Unrehearsed Spoken Dialogue

No.	Lexeme	Singular							
		Female Singular Referent		Male Singular Referent		Mixed-Sex Referrents		Only Female Referents	
		Raw	NF	Raw	NF	Raw	NF	Raw	NF
1.	*Lehrer*	0/30	0.0	30/30	100.0	23/30[12]	76.6	2/30	6.666
2.	*Schüler*	0/30	0.0	30/30	100.0	29/30	96.6	6/30	20.0
3.	*Tourist*	N/A	N/A	N/A	N/A	13/13	100.0	13/13	100.0
4.	*Spion*	0/30	0.0	30/30	100.0	30/30	100.0	N/A	N/A
5.	*Bundeskanzler*	0/30	0.0	30/30	100.0	30/30	100.0	N/A	N/A
6.	*Präsident*	0/30	0.0	30/30	100.0	30/30	100.0	N/A	N/A
7.	*Selfiemacher*	0/30	0.0	30/30	100.0	30/30	100.0	30/30	100.0
8.	*Iphoner*	0/30	0.0	30/30	100.0	30/30	100.0	25/30	83.3
	Arithmentic Mean		0%		100%		92.27%		57.14%[11]

The eight lexical items were tested in four conditions, as explained in Section 3 (11). Therefore, the results in Table 4 and 5 are divided into these four conditions. The data are further divided into raw and nf (normalized frequency). The raw column indicates the frequency of the lexical item in a given condition. The denominator for the raw column is predominantly 30 given that there were 30 participants. However, the denominator is not always 30.[13] The nf (normalized frequency) column gives the arithmetic mean of the raw score to enable a statistical comparison among all the lexical items and conditions. There were some elicitation problems with the lexical item *Tourist* because the chosen images did not elicit a natural response and speakers had to be prompted which created unnatural responses with this lexical item.[14] Consequently, the results for *Tourist* in Table 4 and 5 are questionable insofar as they reflect spontaneous speech; especially in the female-only category as the result is a suspected outlier. Thus, including the outlier *Tourist* in the average may give an unrealistic $\bar{x}$ (arithmetic mean), as it skews the data. The median is therefore a more accurate indication of the center of distribution for the only-female referent plural group. Figure 2 provides a boxplot of the distribution of the use of the generic masculine when referring to a group of female-only referents which indicates that 20 is the Median.[15]

Whether the lexical item was a real or nonce word did not affect the speakers' use of the suffix -*in* and the generic masculine with all referents, except female-only plural referents. Figure 3 and Figure 4 provide a graphical comparison of the mean frequency. Figure 3 shows that when describing female-only plural referents, speakers used the suffix -*in* more frequently with real words than with nonce words. The dotted line across the X-axes shows the centers of distribution.

Figure 2. *The Distribution of the Frequency of the Generic Masculine For Female-Only Plural Referents*
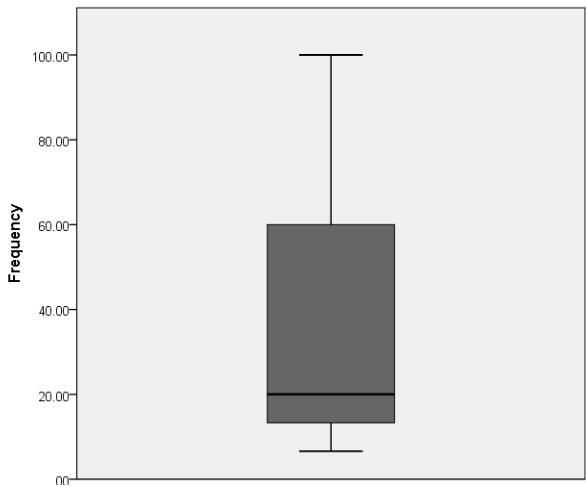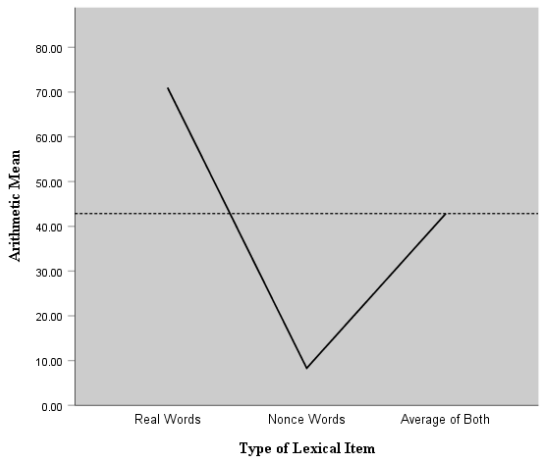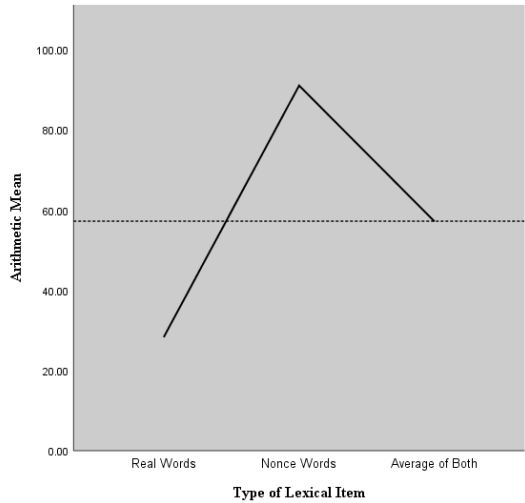

Figure 3. *The Mean Frequency of the Use of the Suffix -in for Female-Only Plural Referents by Word Type*

Figure 4. *The Mean Frequency of the Use of the Generic Masculine for Female-Only Plural Referents by Word Type*

4.2 Effects of the Sex and the Age of the Speaker

A two-way ANOVA (analysis of variance) was run to compare the effects of the sex and the age of speakers on the frequency of the derivational suffix *-in* with female-only group referents, i.e., condition four. Given that there was no significant variation in frequency in the other three conditions, the effects of the age or the sex of the speaker were irrelevant. Therefore, the ANOVA was only carried out on the fourth condition. Table 6 provides the descriptive statistics and the results from the ANOVA.

Table 6. The Effect of Age and Sex of the Speaker on the Frequency of the Derivational Suffix -*in* with Female Only Group Referents

DESRIPTIVE STATISTICS	Ages 11-12	Ages 13-15	Ages 16-18	Ages 19-39	Ages 40+	Total
MALE						
Count	3	3	3	3	3	15
Sum	140	120	140	120	120	640
Average	46.67	40	46.67	40	40	**42.67**
Variance	133.33	0	533.33	0	0	106.67
Standard Deviation	11.55	0	23.09	0	0	10.33
FEMALE						
Count	3	3	3	3	3	15
Sum	120	120	120	120	100	580
Average	40	40	40	40	33.33	**38.67**
Variance	0	0	400	0	133.33	83.81
Standard Deviation	0	0	20	0	11.55	9.15
TOTAL						
Count	6	6	6	6	6	
Sum	260	240	260	240	220	
Average	43.33	40	43.33	40	36.67	
Variance	66.67	0	386.67	0	66.67	

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Sample (Sex)	120	1	120	1	**0.329**	4.351
Columns (Age)	186.667	4	46.667	0.389	**0.814**	2.866
Interaction (Sex + Age)	80	4	20		0.167 **0.953**	2.866
Within	2400	20	120			
Total	2786.667	29				

The effects of the sex of the speaker in condition four yielded an F ratio of $F(1, 20) = 1$, $p = .329$, indicating that statistically speaking the difference between male speakers' use of the morpheme $M = 42.69$, $SD = 10.33$ and female speakers' use of the morpheme $M = 38.67$, $SD = 9.15$ was insignificant at the $p > .05$ level. The effects of the age of the speaker in condition four yielded an F ratio of $F(4, 20) = 0.389$, $p = .814$, also indicating that the age of the speaker is insignificant at the $p > .05$ level. The α value (alpha value) used in this statistical analysis was .05. Therefore, $p < 0.05 = H_0$ (rejection of the null hypothesis). In this study, the null hypothesis refers to the insignificant effects of sex and age. The analysis also indicated that the interaction effect was insignificant at an F ratio of $F(4, 20) = 0.167$, $p = .953$. Therefore, it can be concluded that, statistically speaking, the use of the derivational suffix -*in* when referring to a group of female-only referents is not affected by the sex and the age of the speaker.

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5. Discussion

5.1 The Frequency of the Derivational Suffix -in and the Generic Masculine

As reported in Section 4, Table 4 indicates that the derivational suffix -*in* was always used when referring to a singular female referent regardless of the lexical item used. Furthermore, responses also show that the length of the lexical item did not influence the frequency of the suffix. The utterance in (13), produced when describing Image K, exemplifies this. Here the compound noun is already nine syllables in length before the affixation of the suffix -*in*. Nonetheless, the speaker affixes the morpheme making it ten syllables. The data also show that when referring to just one male referent, the suffix is not used. These findings in the singular conditions (1), and (2), are not particularly revealing since these are expected in the prescriptive rules of grammar.

(13) "sie   ist die   Bundespräsidentschaftskandidatin"

     she-3SG-FEM   is   DEF-SG-FEM presidential candidate-fem

     'she is the presidential candidate'

     However, the data in conditions (3) and (4), i.e., mixed-sex groups and female-only group referents, reveal significant findings. The data show that, with the exception of one token from one of the thirty speakers, the plural suffix -*innen* was not used when referring to mixed-sex groups. Therefore, based on the responses in the present study one can conclude that the so-called *Paarform*, which has become productive in written and formal spoken dialogue (Castillo, 2003: 207; Bußmann & Hellinger, 2003; Mucchi-Faina, 2005), is not used

frequently in unrehearsed spoken dialogue. Instead, speakers used the generic masculine plural 92.27% of the time. 76.6% (23 speakers) used the generic masculine when referring to a mixed-sex group of teachers, i.e., to describe Image B. The remaining 23.4% (7 speakers) used gender-neutral lexemes such as *Lehrerkraft*, *Kollegium* and *Lehrkörper* 'faculty'.

The one token of the *Paarform* came from a social worker (60 years of age) from Rheinland-Pfalz (Speaker 27). Their answer is reported in (14). After the study, the speaker was informed that they were the only speaker to use the *Paarform*. Their response is reported in (15). The data and their answer suggest that the most natural, unrehearsed answer to utter when referring to or describing these referents is one with the generic masculine. Statistically, the *Paarform* was used only 0.66% of the time and its use points towards a conscious attempt to be gender-fair.

(14) "ich   sehe   Schülerinnen   und   Schüler"

     1SG   PRS-3SG pupil-FEM-PL   -MASC-PL

     'I see female pupils and male pupils'

(15)   "Die Tatsache, dass ich Sozialarbeiter bin, spielt vielleicht eine Rolle, weil ich der Wörter bewusst bin, die ich benutze - vielleicht bewusster als andere Leute"

     'The fact that I'm a social worker perhaps plays some role because I'm more aware of the words that I use—perhaps more aware than others'

    The most revealing condition was the female-only plural group, i.e., condition four. Despite the fact that all speakers could clearly see

that the referents in the images were female, the -*innen* form was used only 42.85% of the time.[16] Prescriptively, one would expect the -*innen* form to prevail in this condition since all referents were visibly female. With the lexical item *Lehrer*, 28 speakers used the -*innen* form, i.e., *Lehrerinnen* 'female teachers', when describing two female teachers. The remaining two speakers realized the lexical item using the generic masculine plural form *Lehrer* 'teachers'. With the lexical item *Schüler*, only 24 of the speakers used the -*innen* form. The remaining six speakers used the generic masculine form.

This finding was revealing, particularly with the tokens from *Schüler*, because Image C, which was used to elicit this response, clearly depicted an interaction between three female pupils and a female teacher. While it is common knowledge that the generic masculine can be used to describe mixed-sex groups, the use of the generic masculine to describe female-only groups is perhaps an insightful finding which is not typically included in prescriptive grammars. The fact that six speakers independently used the generic masculine to describe the same image, which equates to 20%, shows that this was not simply a sampling error. (16) shows the responses from the speakers who used the generic masculine to describe Image C. The sex, age and profession of the speaker are indicated in parenthesis. However, these do not appear to be contributing social factors. (17) shows the responses given in the generic masculine used to describe Image B.

(16)   (a) "Die Lehrerin steht an der Tafel und erklärt etwas den Schülern. Die Mädchen hören zu" (72, f, retired nurse)

'The teacher-FEM is standing at the board and is explaining something to the students-MASC. The girls are listening'

(b) "Ich sehe kleine Schüler und eine Lehrerin. Alle sind Mädchen"

'I see small pupils-MASC and a teacher-FEM. All of them are girls.' (62,m, teacher)

(c) "Die Lehrerin unterrichtet Schüler - die Mädchen sitzen da und gucken die Lehrerin an" (52, m, engineer)

'The teacher-FEM is teaching the pupils-masc. The girls are sitting there and looking at the teacher-fem'

(d) "Eine Lehrerin erklärt etwas den Schülern" (17, f, student)

'A teacher-FEM is explaining something to the pupils-masc'

(e) "Da steht eine Lehrerin an der Tafel und erklärt etwas den Schülern" (17, m, student)

'A teacher-fem is standing at the board and is explaining something to the-DAT-PL pupils-MASC-DAT'

(f) "Ich sehe drei Mädchen—sie sind Schüler" (16, m, student)

'I see three girls, they are pupils-MASC'

(17) (a) "Die Frauen sind Lehrer... Lehrerinnen sind auch Lehrer, egal ob sie männlich oder weiblich sind" (15, m, student)

> 'The women are teachers-masc... female teachers are also teachers-masc regardless of whether they are male or female'

(b) "Die Frauen sind Lehrer" (15, f, student)

'The women are teachers-MASC'

5.2 Why Use the Generic Masculine for a Group of Female-Only Referents?

By analyzing the above tokens, I propose two possible explanations as to why and when some speakers may make the linguistic decision to use the generic masculine to refer to a group of female-only referents. These proposed explanations are tautology and pragmatic intention.

Firstly, it appears that speakers sometimes use the generic masculine when it is already contextually clear that they are referring to females. In the examples in (17), *Lehrer* is a PN (predicate nominative). Therefore, it simply renames the subject *Frauen* 'women'. Given that the subject already indicates the sex, it is tautological and redundant to mention it again in the pn. In example (16f) "ich sehe drei Mädchen—sie sind Schüler", the use of the suffix -*innen* would also be pleonastic. The speaker first mentions the biological sex of the referents by uttering *Mädchen* 'girls'. Given that *sie sind Schüler* modifies the *drei Mädchen*, it is redundant to use the suffix -*innen* given that their biological sex has already been established. While in this example, the sex of the referents is uttered first, syntax does not appear to play a role. In example (16a), the speaker first utters the generic masculine form *Schüler*, but later utters *die Mädchen* 'the girls'. In this example, *Mädchen* is extraposed but refers back to the *Schüler*.

Morphology also does not appear to affect the use of the generic masculine. Examples (16a) (16d) and (16e) show realizations of *Schüler* in the dative plural *den Schülern* 'the-DAT.PL pupils.PL-DAT.PL' when referring to the three female pupils. If the context already establishes referents' sex, it is tautological to use the suffix *-in(nen)* to restate it. If speakers can reduce the length of an utterance without affecting comprehension, speakers may choose to do so. There are other instances in the German language where speakers commonly omit the suffix *-in* for tautological reasons. An example of this is the combination of the titles *Frau* 'Mrs.' and *Doktor* 'Doctor', e.g. "Frau Doktor Angela Merkel". While insofar as agreement is concerned it ought to be "Frau Doktorin" 'Mrs. Doctor-FEM', speakers often omit *-in* since it is tautological ("Die Kanzlerin hat Geburtstag", 2014).[17]

Secondly, I propose that speakers use the generic masculine to describe female-only plural referents when it is pragmatically unimportant or irrelevant to the speaker to overtly mention that the referents are female.[18] In examples (17a) and (17b), two speakers realized *Lehrer* in the generic masculine when referring to female-only referents by uttering "die Frauen sind Schüler" 'The women are students-MASC'. One of the two speakers followed up by saying, "Lehrerinnen" 'female teachers' are also "Lehrer" 'teachers-MASC', regardless of whether they are male or female (17a). Here the speaker is pointing out that male and female teachers share the same title irrespective of their biological sex. Therefore, by using the generic masculine form, it is pragmatically unimportant to the speaker to morphologically indicate the fact that the referents are female. The pragmatic intention is key to understanding how speakers use of this derivational suffix because, unless speakers realize that all of the referents are female, and they deem it worthy to mention that they are

female through overt morphology, it is generally not used in unrehearsed spoken dialogue for plural referents. This is logical given that there are few realms in today's society in which a group of people, whether soldiers, students, nurses etc., are unisex by expectation.

With the lexical item *Tourist* 'tourist', the generic masculine was always used to describe a group of female tourists despite the fact that the images clearly showed a group of female referents and no male referents. *Touristinnen* 'tourists-FEM' was never uttered during the study despite the word form existing in the language. In conversations with participants after the study, speakers revealed that *sie ist Touristin* 'she is a tourist-FEM' is perhaps a marked response and the generic masculine *sie ist Tourist* 'she is a tourist-MASC' would be more common. To test whether *Touristin* is marked because of semantic or morphological reasons, further research would be necessary with other lexical items ending in the suffix *-ist*.

As shown in Figure 3 and 4, when referring to a group of female referents the frequency of both the generic masculine and the suffix *-in* fluctuates depending on whether they were real or nonce words. When using the nonce words *Selfiemacher* 'selfie-taker' and *Iphoner* 'iPhone user' to describe a group of female referents, speakers used the generic masculine more frequently than the plural suffix *-innen*. The generic masculine was always used with *Selfiemacher* to describe a group of female referents, i.e., the two females referents in Image R shown in Figure 1. This is most likely because, in the large majority of these utterances, *Selfiemacher* was a PN. With *Iphoner*, 16.6% (five speakers) did use the *-innen* form in the fourth condition but the remaining 83.4% (25 speakers) used the generic masculine. Interestingly, all of the

utterances of *Iphonerinnen* 'Iphoners-FEM' were not used predicatively such as "ich sehe zwei Iphonerinnen" 'I see two Iphoners-FEM'.

In terms of frequency, when referring to a group of female-only referents, there was a significant difference in the use of the generic masculine and gender-fair language with the real and nonce words (7–8), as speakers used the generic masculine more frequently with nonce words. Given that the speakers heard the nonce words for the first time during the study, their responses may help to give an insight into how speakers use innovations in an unrehearsed manner. If speakers are constantly exposed to speakers using a particular word form in a certain way then they may have a tendency to simply repeat what they hear, which may explain the difference between the responses with the nonce and real words. Therefore, these results suggest that in unrehearsed spoken dialogue speakers use the generic masculine more frequently with unfamiliar or new words than with pre-existing words.

6. Conclusion.

6.1 The Generic Masculine Prevails

Despite the proliferation of scholarship regarding the use and effects of the generic masculine and gender-fair innovations, to the very best of my knowledge, no empirical research had previously investigated their frequency in unrehearsed spoken dialogue. This study aimed to fulfill this gap. While the use of gender-fair innovations has increased in written and formal language in the last 50 years, according to the present study this type of language does not appear frequently in unrehearsed spoken dialogue in Modern Standard German. Instead, the generic masculine prevails despite the prescriptive ideological approaches advocated by feminists. The fact that these innovations are

not used frequently in unrehearsed spoken dialogue suggests that speakers have to make a conscious decision to use them, which seems logical given that most of these innovations were imposed on the language. It may be for this reason that these innovations appear frequently in written and formal dialogue, as these are typically acts which involve preparation. A more optimistic conclusion might be that the progress towards gender neutrality in numerous realms of society has been so dramatic that the need for gender-fair language outside of legal and formal contexts has been obviated. However, more empirical evidence would be needed to confirm this.

This study suggests that while the suffix -*in* is used to describe a group of female-only referents, there are instances where the generic masculine is used. While it is not entirely clear what triggers a response using the generic masculine with a group of female-only referents, the age and sex of the speaker are not statistically significant factors. This statistical finding does not support Labov's observation that female speakers tend to use more progressive and innovative forms than men. These results do not claim that Labov's observation is not true, but rather state that, based on the sample used in this study, the sex of the speaker is not a statistically significant factor regarding the frequency of the derivational morpheme -*in* in Modern Standard German.

Two proposals were put forward to explain when and why some speakers might choose to use the generic masculine to refer to a group of female referents, namely when either the context already establishes that the referents are female or simply when mentioning the referents' sex is pragmatically unimportant or irrelevant to the speaker. While prescriptively one would expect the plural suffix -*innen* to be used

when referring to a group of female-only referents, as observed in the present study, the spontaneous and perhaps natural use of this suffix appears to be less determined by grammatical and biological agreement but instead more so determined by the pragmatic intention of the speaker. This is important from a pedagogical perspective because learners are often taught that the suffix *-in* must be used if the referent is female, yet as the present study has shown, this is not always the case in natural unrehearsed speech.

6.2 Limitations of the Study and Outlet for Future Research

All but one of the speakers came from Germany (67 % of the speakers came from *Niedersachsen* 'Lower Saxony', 30 % of the speakers came other German *Bundesländer* 'federal states'). Only one speaker came from another German-speaking country which was Switzerland. While geographical location does not appear to be an influential social factor, it was not possible to test this based on the responses of one speaker. Consequently, the next logical step would be to carry out this study in different geographical German-speaking regions to investigate whether geography is a social factor. Furthermore, this study only investigated six real words and two nonce words. It might be useful, therefore, to add more real words and nonce words to test whether the results are still the same for other lexical items.

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APPENDIX 1: IMAGES

Image A

In the background there is a female teacher standing at the blackboard in a classroom. In the foreground there are approximately 30 pupils (male and females) sitting at their desks facing her.

Aimed to Elicit Word Forms: 1-Schüler, 2-Lehrer

Image B

This image is of a group of male and female teachers who work at the same school who are having their photo taken.

Aimed to Elicit Word Forms: 1-Lehrer

Image C

There are four people in this image: a female teacher and three female pupils. They are in a classroom and the teacher is standing at the board and is explaining something to the three girls. Everyone is visibly female.

Aimed to Elicit Word Forms: 1-Schüler, 2-Lehrer

Image D

This picture is of a group of tourists standing in a long line waiting to get into a museum in Paris.

Aimed to Elicit Word Forms: 3-Tourist

Image E

There are four women in this picture who are looking at a map. They look like they are on vacation and are lost.

Aimed to Elicit Word Forms: 3-Tourist

Image F

There are three young women looking through the lens of their camera at something; typical cliché of tourists.

Aimed to Elicit Word Forms: 3-Tourist

Image G

Image of James Bond and a female spy.

Aimed to Elicit Word Forms: 4-Spion

Image H

This is an image of Angela Merkel.

Aimed to Elicit Word Forms: 5-Bundeskanzler

Image I

This is a picture of former Bundeskanzler Helmut Kohl.

Aimed to Elicit Word Forms: 5-Bundeskanzler

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Image J

This is a picture of President Obama in the White House. He is smiling at the camera.

Aimed to Elicit Word Forms: 6-Präsident

Image K

This is a picture of Hillary Clinton. Participants were told she wants to do what Obama does.

Aimed to Elicit Word Forms: 6- Präsident

Image L

This is a picture of a man using his iPhone.

Aimed to Elicit Word Forms: 8- Iphoner

Image M

This is a picture of two women using their iPhone.

Aimed to Elicit Word Forms: 8- Iphoner

Image N

This is a picture of a man and a women using their iPhone.

Aimed to Elicit Word Forms: 8- Iphoner

Image O

This is an image of lots of people using an iPhone.

Aimed to Elicit Word Forms: 7- Selfiemacher

Image P

This is an image of a man taking a selfie.

Aimed to Elicit Word Forms: 7- Selfiemacher

Image Q

This is a picture of a woman taking a selfie.

Aimed to Elicit Word Forms: 7- Selfiemacher

Image R

This is a picture of two women taking a selfie.

Aimed to Elicit Word Forms: 7-Selfiemacher

Image S

This iconic picture, the 'most famous selfie' is a group of male and female celebrities at the Oscars ("Most Famous Selfie", 2004).

Aimed to Elicit Word Forms: 7- Selfiemacher

Distraction Images (6)

There were also 6 distraction images of cars, and a cat and topics which were completely unrelated.

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APPENDIX 2

Speaker	Sex	Age	Place of Birth	Profession
1	M	11	East Frisia, Germany	Student
2	M	12	East Frisia, Germany	Student
3	F	12	East Frisia, Germany	Student
4	F	12	East Frisia, Germany	Student
5	M	12	East Frisia, Germany	Student
6	M	13	East Frisia, Germany	Student
7	M	14	East Frisia, Germany	Student
8	F	13	East Frisia, Germany	Student
9	M	15	East Frisia, Germany	Student
10	F	15	East Frisia, Germany	Student
11	F	14	East Frisia, Germany	Student
12	F	15	East Frisia, Germany	Student
13	F	17	East Frisia, Germany	Student
14	M	16	East Frisia, Germany	Student
15	F	17	East Frisia, Germany	Student
16	M	17	East Frisia, Germany	Student
17	M	18	East Frisia, Germany	Student
18	F	17	East Frisia, Germany	Student
19	M	19	East Frisia, Germany	Student
20	M	23	Rheinland-Pfalz, Germany	Student
21	F	23	Bavaria, Germany	Student
22	M	26	Saxony, Germany	Student

23	F	26	Berlin, Germany	Student
24	F	28	Bavaria, Germany	Student
25	M	52	East Frisia, Germany	Engineer/Teacher
26	M	60	Saarland,Germany	Teacher
27	M	60	Rheinland-Pfalz, Germany	Social Worker
28	F	72	East Frisia, Germany	Retired Nurse
29	F	62	Verden, Germany	Teacher
30	F	55	Basel, Switzerland	Retired

NOTES

1. This list is not exhaustive. (Braun, et al. 1998; Bußmann & Hellinger, 2003; Castillo, 2003; Moser & Hannover, 2014; Köser, Kuhn, Sczesny & Sabine, 2015)
2. The view that the generic masculine is androcentric, is based on the semantic view that there is a tie between grammatical gender and sex. This is the view adopted by many feminist language critics. It is worth

noting, however, that there is an opposing view, i.e., the "arbitrary" view, which maintains that there is no association. (For an overview see Braun et al. 2005: 4)

3. This list is not exhaustive.

4. For a historical overview of the development of the generic masculine in German, see Irmen & Steiger 2007.

5. For literature on the prescriptive change in job advertisements see Oksaar 1976; Stickel 1983; Oldenburg 1998; Lenk 2002; Demey 2002; Hellinger & Bußmann 2003.

6. Unfortunately, for copyright reasons, it was not possible to include the images. However, Appendix 1 provides a written description of the images which were used. Image R (Figure 1) does belong to the author, which is why it is included.

7. Lexical items 7 and 8 are nonce words which were coined by the author for the purpose of this study. A Selfiemacher is someone who takes a selfie and an Iphoner is someone who uses an iPhone.

8. To see the biographical information of the participants, see the Appendix 2. Their names are not included.

9. 42.85 is the arithmetic mean of the morpheme -in including the two coined lexical items. 71.2% is the arithmetic mean of the morpheme -in excluding the two coined lexical items. 86.6% is the arithmetic mean of the morpheme –in excluding the two coined lexical items and the tokens from Tourist.

10. N/A refers to the fact that no data were collected for a lexical item in a given condition. Spion, Bundeskanzler and Präsident were not tested in the fourth condition, given that there are very few images

available of a group of female Spioninnen 'spies-fem', Bundeskanzlerinen 'chancellors-fem', and Präsidentinnen 'presidents-fem'.

11. Given that the data were skewed because of a suspected outlier, an arithmetic mean is not a useful center of distribution. Instead the Median is a more accurate representation which is 20%. The arithmetic Mean excluding the nonce words is 28.7%.

12. 23/30—the remaining 7 were gender neutral (neither the generic masculine nor the -in).

13. Only 13 speakers used Tourist to describe referents in the plural conditions (3) and (4). The remaining 17 participants simply used a different lexeme. Therefore, the denominator for that condition is 13 not 30.

14. When describing singular referents, Tourist was never used. Instead, speakers used epicene nouns such as Person 'person' and Mensch 'human being' or alternatively they used lexical items which were not being tested such as Urlauber 'vacationer'.

15. This is the center of distribution of the real words, not the coined words. Interestingly, there was a big difference between the way speakers used gender with the real and the nonce words. Therefore, the nonce words would also skew the average. See Figure 2 and Figure 3.

16. This is the mean of both real and nonce words.

17. It is worth noting, however, that typographically speakers often abbreviate the title Doktor to Dr. as in "Frau Dr. Angela Merkel" ("Offener Brief an Frau Dr. Angela Merkel" 2017), which avoids this issue of grammatical agreement in writing.

18. For literature on the importance of pragmatics when using the generic masculine, see Becker (2008).

REFERENCES

Albrecht, Urs. (2000). Unserer Sprache ist verbildet durch einen Maskulinum: Die deutsche Schweiz auf dem Weg zu einer geschlechtergerechten Sprache. *Bulletin Suisse de Psychologie Appliquée* 72:11–46.

Becker, Thomas. (2008). Zum generischen Maskulinum: Bedeutung und Gebrauch der nicht-movierten Personenbezeichnungen im Deutschen. *Linguistische Berichte* 213:65–75.

Bem, Sandra, L. & Daryl J. Bem. (1973). Does sex-biased job advertising "aid and abet" sex discrimination? *Journal of Applied Social Psychology* 3:6–18.

Braun, Friederike; Anja Gottburgsen; Sabine Sczesny; & Dagmar Stahlberg. (1998). Können Geophysiker Frauen sein? Generische Personenbezeichnungen im Deutschen. *Zeitschrift für germanistische Linguistik* 26:265–283.

Braun, Friederike; Susanne Oelkers; Karin Rogalski; Janine Bosak; & Sabine Sczesny. (2007). "Aus Gründen der Verständlichkeit ...": Der Einfluss generisch maskuliner und alternativer Personenbezeichnungen auf die kognitive Verarbeitung von Texten. *Psychologische Rundschau* 58:183–189.

Braun, Friederike; Sabine Sczesny & Dagmar Stahlberg. (2005). Cognitive effects of masculine generics in German: An overview of empirical findings. *Communications* 30:1–21.

Bußmann, Hadumod, & Marlis Hellinger. (2003). Engendering female visibility in German. In Marlis Hellinger and Hadumod Bußmann (eds.), *Gender across Languages*, 141–74. Amsterdam and Philadelphia, PA: John Benjamins.

Castillo, Días Estrella. (2003). *Der Genus/Sexus-Konflikt und das generische Maskulinum in der deutschen Gegenwartssprache* (Doctoral Dissertation). Retrieved from <https://opus4.kobv.de/opus4-uni-passau/files/33/ECastillo.pdf>

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

Cralley, Elizabeth L., & Janet Ruscher B. (2005). Lady, girl, female, or woman: Sexism and cognitive busyness predict use of gender-biased nouns. *Journal of Language and Social Psychology* 24:300–314.

Demey, Eline. (2002). Leser und Leserinnen gesucht! Zum generischen Gebrauch von Personenbezeichnungen in deutschen Stellanzeigen und Zeitungsartikeln. *Deutsche Sprache* 30:28–49.

Dudenredaktion. (2006*). Das Herkunftswörterbuch: Etymologie der deutschen Sprache*. Berlin: Dudenverlag.

Durrell, Martin. (2006). *Hammer's German Grammar and Usage*, 4th edn. London: Arnold.

Fischer, Roswitha. (2004). Coach-Frau, Frau Coach oder Coacherin? Wie Sprachstruktur geschlechtergerechten Sprachgebrauch beeinflusst. *Adam, Eva und die Sprache* 5: 176–190.

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Förderung des Koblenzer Christopher Street Days. (2017). Offener Brief an Frau Dr. Angela Merkel. *CSD-Koblenz-FV*. Retrieved from <http://www.csd-koblenz-fv.de/2017/01/offener-brief-an-frau-dr-angela-merkel/>.

Formanowicz, Magdalena; Sylwia Bedynska; Aleksandra Cisłak; Friederike Braun; & Sabine Sczesny. (2013). Side effects of gender-fair language: How feminine job titles influence the evaluation of female applicants. *European Journal of Social Psychology* 43:62–71.

Grabrucker, Marianne. (1993). *Vater Staat hat keine Muttersprache*. Frankfurt: Fischer.

Guentherodt, Ingrid; Marlis Hellinger; Luise Pusch F.; & Senta Trömel-Plötz. (1980). Richtlinien zur Vermeidung sexistischen Sprachgebrauchs. *Linguistische Berichte* 69:15–21.

Gygax, Pascal; Ute, Gabriel; Oriane, Oakhill; Jane Garnham; & Alan Garnham. (2008). Generically intended, but specifically interpreted: When beauticians, musicians and mechanics are all men. *Language and Cognitive Processes* 23:464–485.

Hamilton, Mykol C. (1991). Masculine bias in the attribution of personhood: People = male, male = people. *Psychology of Women Quarterly* 15:393–402.

Hamilton, Mykol C.; Barbara Hunter; & Shannon Stuart-Smith. (1992). Jury instructions worded in the masculine generic: Can a woman claim self-defense when "he" is threatened? In Joan Chrisler & Doris Howard (eds.), *New Directions in Feminist Psychology*: *Practice, Theory, and Research*, 169–178. New York: Springer

Hamilton, Mykol, C. (1988). Masculine generic terms and misperception of AIDS risk. *Journal of Applied Social Psychology* 18:1222–1240.

Heise, Elke. (2000). Sind Frauen mitgemeint? Eine empirische Untersuchung zum Verständnis des generischen Maskulinums und seiner Alternativen. *Zeitschrift für Sprache und Kognition* 19:3–13.

Hellinger, Marlis. (1990). *Kontrastive Feministische Linguistik: Mechanismen sprachlicher Diskriminierung im Englischen und im Deutschen*. Hueber: Ismaning.

Hellinger, Marlis. (1995). Language and Gender. In P. Stevenson (ed.), *The German language and the real world*: *Sociolinguistic, cultural and pragmatic perspectives on contemporary German*, 281–316. Oxford: Oxford University Press.

Irmen, Lisa, & Vera Steiger. (2007). Zur Geschichte des Generischen Maskulinums: Sprachphilosophische, sprachwissenschaftliche und psychologische Aspekte im historischen Diskurs. *Zeitschrift für Germanistische Linguistik* 33:212–235.

Irmen, Lisa, & N. Kaczmarek. (2000). Beeinflusst das grammatische Geschlecht die Repräsentation von Personen in einem mentalen Modell? Poster auf dem 42. Kongress der Deutschen Gesellschaft für Psychologie, 24–28, September 2000.

Irmen, Lisa, & Nadja Roßberg. (2004). Gender markedness of language: The impact of grammatical and nonlinguistic information on the mental representation of person information. *Journal of Language and Social Psychology* 23:272–307.

Irmen, Lisa, & Astrid Köhncke. (1996). Zur Psychologie des "generischen" Maskulinums. *Sprache & Kognition* 15:152–166.

THE USE OF THE GENERIC MASCULINE, THE DERIVATIONAL SUFFIX *-IN* AND GENDER-FAIR INNOVATIONS IN UNREHEARSED SPOKEN DIALOGUE IN MODERN STANDARD GERMAN

Irmen, Lisa, & Eva Schumann. (2011). Processing grammatical gender of role nouns: Further evidence from eye movements. *Journal of Cognitive Psychology* 23:998–1014.

Klein, Josef. (1988). Benachteiligung der Frau im generischen Maskulinum: eine feministische Schimäre oder psycho-linguistische Realität? In N. Oellers (ed.), *Vorträge des Germanistentages Berlin 1987: Germanistik und Deutschunterricht im Zeitalter der Technologie. Selbstbestimmung und Anpassung. Vol. 1: Das Selbstverständnis der Germanistik*, 310–319. Tübingen: Niemeyer.

Köser, Sara; Elisabeth A. Kuhn; & Sabine Sczesny. (2015). Just reading? How gender-fair language triggers readers' use of gender-fair forms. *Journal of Language and Social Psychology* 34:343–357.

Labov, William. (2001). *Principles of Language Change*, *Volume 2: Social Factors.* Oxford: Blackwell.

Lamb, Victoria, & Filippo Nereo. (2012). Equality amongst citizens? A study of how the German basic law and the German version of the Swiss constitution exhibit and avoid sexist language. *German Life and Letters* 65:109–126.

Lenk, Uta. (2002). The masculine is not what it used to be? German job advertisements after 30 years of feminist concern. In Janet Holmes (ed.), *Gendered speech in social context: Perspectives from Town and Government* 152–177. Wellington, N2: Victoria University Press.

Lindner, Viktoria, & Helmut Lukesch. (1994). *Geschlechtsrollen-stereotype im deutschen Schulbuch*: *Eine inhaltsanalytische Untersuchung von Schulbüchern für Grund-, Haupt- und Realschulen der Fächer Deutsch, Mathematik, Heimat- und Sachkunde sowie Religionslehre in Bayern, Nordrhein-Westfalen und der ehemaligen DDR zugelassen im Zeitraum von 1970 bis 1992*. Regensburg: Roderer.

Markom, Christa, & Heidi Weinhäupl. (2007). *Die anderen im Schulbuch: Rassismen, Exotismen, Sexismen und Antisemitismus in österreichischen Schulbüchern*. Vienna: Braumüller.

Merkel, Elisa. (2011). Geschlechtergerechte Sprache an den universitären Gleichstellungskonzepten— eine vergleichende Analyse. *CEWS Journal* 87:39–45.

Moser, Franziska. (2008). Generisches Maskulinum oder Beidnennung? Der Einfluss der Sprache auf die mentale Repräsentation der Frauen. (Unpublished master's thesis). Universität Bern, Bern, Switzerland.

Moser, Franziska, & Betinna Hannover. (2014). How gender fair are German schoolbooks in the twenty-first century? An analysis of language and illustrations in schoolbooks for mathematics and German. *European Journal of Psychology of Education* 29(3): 387–407.

Mucchi-Faina, A. (2005). Visible or influential? *Language Reforms and Gender (In)equality. Social Science Information* 44:189–215.

Not Listed. (2014). Die Kanzlerin hat Geburtstag. *Kids.t-online.de*. Retrieved from http://kids.t-online.de/angela-merkel-alles-gute-zum-geburtstag/id_70243748/index.

Oksaar, Els. (1976). *Berufsbezeichnungen im heutigen Deutsch*. Düsseldorf: Schwann.

Oelkers, Susanne. (1996). Der Sprintstar und ihre Freundinnen: Ein empirischer Beitrag zur Diskussion um das generische Maskulinum. *Muttersprache* 106:1–15.

Oldenburg, Antje. (1988). Von Arzthelfern, Bauschlosserinnen und anderen Berufstätigen: Zum Gebrauch von Personenbezeichnungen in Stellenanzeigen. *Muttersprache* 108:67–80.

Preinsberger, A. & E. Weisskircher. (1997). Mathematikschulbücher: eine aktuelle Untersuchung. In Lorenz Lassnigg & Angelika Paseka (eds.), *Schule weiblich—Schule männlich. Zum Geschlechterverhältnis im Bildungswesen*, 132–143. Innsbruck: Studien.

Pusch, Luise F. (1984). *Das Deutsche als Männersprache: Aufsätze und Glossen zur feministischen Linguistik*. Frankfurt am Main: Suhrkamp.

Pusch, Luise F. (1999). *Die Frau ist nicht der Rede wert*. Frankfurt am Main: Suhrkamp.

Rothermund, Klaus. (1998). Automatische geschlechtsspezifische Assoziationen beim Lesen von Texten mit geschlechtseindeutigen und generisch maskulinen Text-Subjekten. *Sprache & Kognition* 17(4):183–198.

Rothmund, Jutta, & Brigitte Scheele. (2004). Personenbezeichnungs-modelle auf dem Prüfstand: Lösungsmöglichkeiten für das Genus-

Sexus-Problem auf Textebene. *Zeitschrift für Psychologie* 212:40–54.

Scheele, Brigitte, & Eva Gaula. (1993). Wählen Wissenschaftler ihre Probleme anders aus als WissenschaftlerInnen? Das Genus-Sexus-Problem als paradigmatischer Fall der linguistischen Relativitätsthese. *Sprache & Kognition* 12:59–72.

Schoenthal, Gisela. (1989). Personenbezeichnungen im Deutschen als Gegenstand feministischer Sprachkritik. *Zeitschrift für germanistische Linguistik* 17: 296–324.

Schweizerische Bundeskanzlei. (2009). *Geschlechtergerechte Sprache: Leitfaden zum geschlechtergerechten Formulieren im Deutschen*. Retrieved from <http://www.bk.admin.ch/dokumentation/ sprachen/04915/05313/>.

Scott, Alan. (2006). Das Suffix -*In*: Eine Ergänzung zum deutschen Wortbildungssystem. *Zeitschrift für Dialektologie und Linguistik* 73(2):161–175.

Sczesny Sabine; Magdalena Formanowicz; & Franziska Moser. (2016). Can gender-fair language reduce gender stereotyping and discrimination? *Frontiers in Psychology* 7: article 26, 1–11.

Stahlberg, Dagmar; Sabina Sczesny; & Friederike Braun. (2001). Name your favorite musician: Effects of masculine generics and of their alternatives in German. *Journal of Language and Social Psychology* 20: 464–469.

Stahlberg, Dagmar; Friederike Braun, Lisa Irmen; & Sabine Sczesny. (2007). Representation of the sexes in language. In K Fiedler (ed.), *Social Communication*, 163–187. New York: Psychology Press.

Stahlberg, Dagmar, & Sabine Sczesny. (2001). Effekte des generischen Maskulinums und alternativer Sprachformen auf den gedanklichen Einbezug von Frauen. *Psychologische Rundschau* 52:131–140.

Stickel, Gerhard. (1983). Frau Müller ist Diplom-Bibliothekar: Zur sprachlichen Form von Diplomgraden. *Mittteilungen des Instituts für deutsche Sprache Mannheim* 9:637–641.

Stout, J. G., & Nilanjana Dasgupta. (2011). When he doesn't mean you: gender-exclusive language as ostracism. *Personality and Social Psychology Bulletin* 3:757–769.

Trömel-Plötz, Senta. (1978). *Linguistik und Frauensprache*. Frankfurt am Main: Fischer Taschenbuch Verlag.

Vervecken, Dries; Bettina Hannover; & Ilka Wolter. (2013). Changing (s)expectations: How gender fair job descriptions impact children's perceptions and interest regarding traditionally male occupations. *Journal of Vocational Behaviour* 82:208–220.

Wallop, Harry. (2014). Oscars 2014: The most famous 'selfie' in the world. *Telegraph*. Retrieved from http://www.telegraph.co.uk/culture/film/oscars/10674655/Oscars-2014-The-most-famous-selfie-in-the-world-sorry-Liza.html.

Whorf, Benjamin Lee, & Caroll, J. B. (1956). *Language, thought, and reality: Selected writings*. Cambridge, Mass: Technology Press of Massachusetts Institute of Technology.

Wright, Joseph. (1888). *A Middle High German Primer: with Grammar, Notes and Glossary*. London: Clarendon Press.

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