

“Spinnt sie” or “Spinnt die”?

Empirical studies on d- and p-pronouns in German

Luise Ehrmantraut, Saarland University

D-pronouns (*der/die/das*) are traditionally classified as demonstrative pronouns, because they often occur in the same contexts of use as *dieser*. However, they also compete with p-pronouns (*er/sie/es*), so they stand between two pronominal subtypes. I therefore propose a new partial classification of the German pronoun system that distinguishes between two d-pronoun types. Based on corpus data, I show that the use of one d-pronoun type is reserved for conceptually oral text types. Furthermore, I present experimental data on prosodic properties of the different d-pronoun types. Finally, I showcase two experiments highlighting valuation and gender as relevant factors influencing pronoun choice.

1 Reclassification

Based on existing classification attempts (Bethke 1990, Weinrich 2007), I propose a new partial classification of the German pronoun system, which considers the observed usage and function spectrum of d-pronouns. It provides for a summary and subdivision of the pronouns of the third person under the term *reference pronouns* (In the following: RPs). D-pronouns are listed in it as demonstrative RPs (besides *dieser, jener*, etc.) and as rhematic RPs. In the latter function, they stand in opposition to the p-pronouns classified as thematic RPs.

Table 1: New partial classification of German pronouns

reference pronouns (third person)	thematic reference pronoun	<i>er, sie, es</i>
	rhematic reference pronoun	<i>der, die, das</i>
	demonstrative reference pronoun	<i>dieser, jener, etc.</i> <i>der, die, das</i>

Recent research on d-pronouns is predominantly concerned with the use of d-pronouns as demonstrative RPs in relation to p-pronouns. The focus is on cases of referential ambiguity as in (1), in which p- and d-pronouns show different reference preferences (Bosch & Umbach 2007, Ellert 2013, Bosch & Hinterwimmer 2016, Bader & Portele 2016/2019).

- (1) Paul war heute mit Hans verabredet. Er / Der hat aber kurzfristig abgesagt.
 Paul was today with Hans appointed. He_{them/dem} has but short term canceled.

My work, conversely, focuses on contexts of use of d-pronouns as rhematic RPs as in (2), where d-pronouns behave as p-pronouns and pronoun choice is guided by pragmatic factors.

- (2) Peter wollte mich heute besuchen. Er / Der hat aber kurzfristig abgesagt.
 Peter wanted me today to visit. He_{them/rhem} has but short term canceled.

According to Bethke (1990) and Weinrich (2007), thematic and rhematic RPs differ in their attention value. While thematic RPs indicate low-attentional continuity, rhematic RPs maintain attention with respect to the referent.

2 Corpus Study

Starting point was the hypothesis that d-pronouns are used more frequently relative to p-pronouns the more conceptually oral the language use is (Bethke 1990).

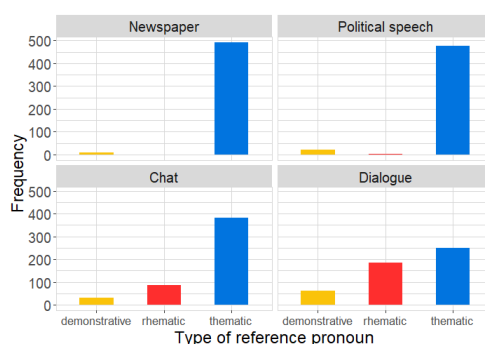
2.1 Procedure

Hence, four text types were examined for occurrences of p- and d-pronouns that cover the range of conceptual orality and writtenness: *newspaper, political speech, chat* and *dialogue*. Suitable corpora were the sub-corpus *TAGGED-T2* of the DeReKo, the sub-corpora *Politische Reden* and *Dortmunder Chatkorpus* of the DWDS and the corpus *FOLK* of the DGD. For each text type, 500 random search hits were considered. Every d-pronoun was analyzed in terms of the d-pronoun type (rhematic or demonstrative).

2.1 Results

A simple multinomial model was calculated using the GAMLj module of the program Jamovi (The jamovi project 2021). For both d-pronoun types (rhematic and demonstrative), the frequency ratio to thematic RPs was analyzed as a function of text type. For the frequency ratio of demonstrative and thematic RPs, the paired comparison of all text types revealed significant differences. For the frequency ratio of rhematic and thematic RPs, the text type *newspaper* was excluded from the analysis, because no rhematic d-pronoun was found. In the paired comparison of the other text types, significant differences were found in each case.

Figure 1: Frequency ratio of demonstrative, rhematic and thematic RPs in different text types



2.2 Discussion

For both d-pronoun types, the results confirm the hypothesis that the more conceptually oral a text or a speech is, the more frequently they occur. One possible explanation is that conceptually oral speech, because of its spontaneity, and spoken speech, because of its volatility, more likely or frequently require attention signals to the listener, for example, in form of rhematic or demonstrative RPs, which fulfill different attention-controlling functions (attention-maintaining vs. attention-diverting). Furthermore, conceptually oral speech is generally more characterized by emotion and expressivity and less by polite restraint, which favors the use of rhematic RPs (Bethke 1990, see chapter 4). For the demonstrative RP, there also exist alternative expressions such as *diese/r*, which are primarily used in conceptually written language, where they represent competitors for the demonstrative d-pronoun.

3 Rating Studies

Since contradictory generalizations about prosodic properties of d-pronouns can be found in the research literature – partly described as basically strongly accented (Weinrich 2007, Engel 2009), partly as usually not conspicuously accented (Ahrenholz 2007) – I conducted two experimental rating studies investigating the accentuability of p-pronouns and d-pronouns in their different functions (thematic, rhematic and demonstrative RPs).

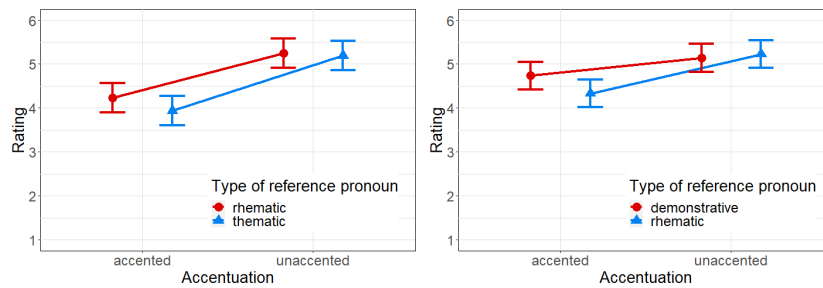
3.1 Design

The first experiment contrasted thematic and rhematic RPs in terms of their accentuability, the second experiment contrasted rhematic and demonstrative RPs. Thus, both experiments crossed the factors pronoun type and pronoun accent, and the dependent variable was the subjects' rating on a seven-point scale (2x2 design). Acoustic stimuli were presented to the subjects (16 items, 32 filler items) embedded in a written description of the utterance situation. The different conditions were constructed as minimal pairs similar to examples (1) and (2), but without referential ambiguity. 60 subjects participated in each of the experiments. The hypothesis was that the acceptability of an accent on the pronoun depends on the pronoun type: demonstrative RPs like the d-pronoun in (1) referring to *Hans* show a higher acceptability of the accented variant in relation to the unaccented variant (default) than thematic and rhematic RPs like the p- and d-pronoun in (2).

3.2 Results

The data was analyzed by calculating a linear mixed effects model using lme4 for R (Bates et al. 2015). The result confirms the hypothesis: Accented demonstrative RPs are rated significantly better than accented rhematic or thematic RPs compared to non-accented ones.

Figure 2: Acceptability rating in dependence of pronoun type and pronoun accent



3.3 Discussion

While d-pronouns as rhematic RPs maintain attention with respect to a salient referent (Bethke 1990, Weinrich 2007), the function of the demonstrative RP is to emphasize a less salient referent (Bader & Portele 2016/2019). Since accentuation serves to emphasize sentence elements on which no special attention was previously focused, it is more compatible with the function of the demonstrative RP than with that of the rhematic RP. The result thus additionally supports the differentiation of the two d-pronoun types.

4 Forced Choice Studies

That thematic and rhematic RPs differ in their attention value becomes clear, for example, in the context of evaluative utterances. The initial hypothesis was that evaluative utterances about personal referents, whether positive or negative, increase the willingness to use rhematic RPs instead of thematic RPs, regardless of the gender of the referent.

4.1 Design

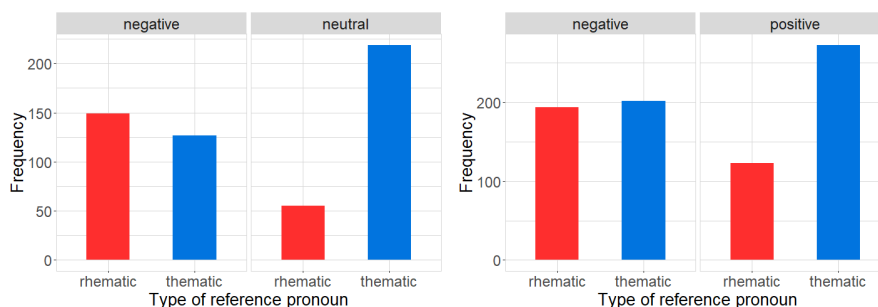
Two experimental studies were conducted. Both crossed the factor valuation with the factor gender. The dependent variable, pronoun type, was determined by the subjects themselves. In the first study, negative (3b) and neutral (3a) utterances were contrasted; in the second, negative and positive (3c) utterances. Apart from that, the experiments were identically structured (2x2 design). In each of the two experiments, 36 subjects were presented with 24 items and 48 filler items.

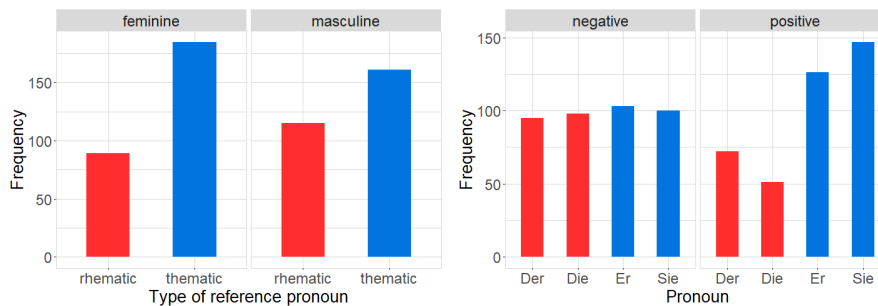
- (3) Gestern war ich bei Kerstin zum Essen eingeladen.
 Yesterday was I at Kerstin for dinner invited.
- a. Sie/Die hat Nudeln gekocht. b. Sie/Die kocht echt furchtbar.
 She_{them/rhem} has noodles cooked. She_{them/rhem} cooks really terrible.
- c. Sie/Die kocht echt super.
 She_{them/rhem} cooks really great.

4.2 Results

For statistical analysis, the program Jamovi was used. A generalized mixed model calculated using the GAMLj module revealed a significant main effect for the factor valuation for both experiments, a significant main effect for the factor gender for experiment 1, and an interaction effect between the factors valuation and gender for experiment 2 (Figure 3).

Figure 3: Results of experimental studies on the influence of valuation and gender on pronoun choice





4.3 Discussion

The results confirmed that valuation increases the likelihood of rhematic d-pronoun occurrence, but also revealed unexpected effects and interaction concerning positive valuation and gender. One possible explanation for those effects is based on research results according to which d-pronouns are classified as more impolite for referring to personal referents (Bellmann 1990). Thus, in positively evaluated utterances, the tendencies to keep attention on the referent by using a d-pronoun and to behave politely towards the person by refraining from using a d-pronoun compete. The fact that rhematic d-pronouns occur much less frequently in positively evaluative utterances with reference to feminine referents could be related to a stronger unconsciously anchored command of politeness towards women. Since Bellmann's study only investigates the reference to present persons by d-pronouns, it must be examined whether the same applies to the reference to absent persons in order to substantiate this explanatory approach. An alternative explanation for the more frequent use of rhematic RPs in negatively evaluative utterances could be that the inhibition threshold for negative utterances about a referent is basically higher than for positive ones and that for this reason negative valuation is basically perceived as more intense compared to positive valuation. Accordingly, the rhematic RP as an attention-controlling intensity marker would be more likely and more frequently required in negative utterances than in positive ones.

References

- Ahrenholz, Bernt. (2007). *Verweise mit Demonstrativa im gesprochenen Deutsch*. Berlin/New York: Walter de Gruyter.
- Bader, Markus & Portele, Yvonne. (2016). Accessibility and Referential Choice: Personal Pronouns and D-pronouns in Written German. *Discours*, 18. DOI: 10.4000/discours.9188.
- Bader, Markus & Portele, Yvonne. (2019). The interpretation of German personal pronouns and d-pronouns. *Zeitschrift für Sprachwissenschaft*, 38(2), 155-190. DOI: 10.1515/zfs-2019-2002.
- Bates et al. (2015). Fitting Linear Mixed-Effects Models Using lme4. *Journal of Statistical Software*, 67(1), 1-48. DOI: 10.18637/jss.v067.i01.
- Bellmann, Günter. (1990). *Pronomen und Korrektur*. Berlin/New York: Walter de Gruyter.
- Bethke, Inge. (1990). *der, die, das als Pronomen*. München: Iudicum.
- Bosch, Peter & Umbach, Carla. (2007). Reference Determination for Demonstrative Pronouns. *ZAS Papers in Linguistics*, 48, 39-51. DOI: 10.21248/zaspil.48.2007.353.
- Bosch, Peter & Hinterwimmer, Stefan. (2016). Anaphoric Reference by demonstrative pronouns in German. In search of the relevant parameters. *Linguistische Arbeiten*, 563, 193-212.
- Ellert, Miriam. (2013). Information Structure Affects the Resolution of the Subject Pronouns *Er* and *Der* in Spoken German Discourse. *Discours*, 12, 3-24. DOI: 10.4000/discours.8756.
- Engel, Ulrich. (2009). *Deutsche Grammatik* (2nd ed.). München: Iudicum.
- Gallucci, Marcello. (2019). *GAMLj: General analyses for linear models*. Retrieved from <https://gamlj.github.io/>.
- R Core Team. (2021). *R: A Language and environment for statistical computing*. Retrieved from <https://cran.r-project.org/>.
- The jamovi project. (2021). *jamovi* (Version 1.6). Retrieved from <https://www.jamovi.org>.
- Weinrich, Harald. (2007). *Textgrammatik der deutschen Sprache* (4th ed.). Hildesheim: Georg Olms.