

ATTITUDES IN THE GERMAN-POLISH CONTEXT BASED ON PERCEPTUAL EVIDENCE

Marzena Żygis^{1,2}, †Joanna Blaszczak³, Aleksandra Ćwiek¹, Markus Saint-Pettersen³, Sarah Wesolek^{1,2}, Piotr Gulgowski³

¹Leibniz-Centre General Linguistics (ZAS), ²Humboldt University Berlin, ³University of Wrocław

zygis@leibniz-zas.de, markus.stpettersen@gmail.com, cwiek@leibniz-zas.de, wesolek@leibniz-zas.de, piotr.gulgowski@uwr.edu.pl

ABSTRACT

The present study investigates how national attitudes/stereotypes influence listeners' perceptions of accented speakers. We studied judgments of Polish listeners towards German and American accented Polish and expected the participants to prefer American over German accent, as implied by the results of a relatively recent national survey of attitudes conducted by a Public Opinion Research Centre (CBOS) [1]. In addition, we hypothesized that the more positive (or negative) judgements would be strengthened when the accented speech is accompanied by a corresponding symbol of the country, i.e., its flag.

Our results revealed no preference of one of the accents over another, nor did the presence of primes affect participants' judgements. They rated the speakers individually and independently from their perceived nationality. The results suggest that preconceived notions of other nationalities are not necessarily evoked when an opinion on an individual speaker is expressed.

Keywords: stereotypes, German, Polish, perception

1. INTRODUCTION

Non-native speakers of a language often encounter difficulties understanding speech and being understood. They also may find themselves the target of prejudice from both native speakers and other non-native speakers alike. These prejudices may be directed at foreigners in general, but an accent can specifically indicate their origins/nationality and evoke particular negative or positive attitudes.

Negative attitudes towards non-native speakers might have different reasons. On the one hand, the cognitive load and the need to adopt new strategies may subconsciously lead to a more negative judgement of the accented speaker. On the other hand, listeners may carry prejudices and stereotypes either about speakers using accented speech in general or about nationalities associated with specific accents.

Previous research has shown that speech perception is not only based on the acoustic signal but also integrates non-linguistic information.

Niedzielski [2] demonstrated that phonemes are perceived differently when accompanied by (true or false) information about the speaker's identity. Hay & Drager [3] showed that perceptions can be influenced by exposure to a symbol of a geographical region. New Zealander participants exposed to a kangaroo were more likely to perceive vowels on a synthesised continuum as spoken by an Australian English speaker. Conversely, participants who saw a kiwi were more likely to perceive the same vowels as spoken by a New Zealand English speaker. Jannedy et al. [3] examined German attitudes towards speakers of Hood German, a sociolect associated with the immigrant communities of Berlin. The evaluations of the speakers were more favourable when they were presented with a French name than when the same speakers were presented with a Turkish name. In summary, the studies show how listeners' judgment can be affected by non-linguistic factors.

The present study continues this line of research by investigating how attitudes towards speakers that may otherwise remain undisclosed can be revealed by means of perceptual evidence. In particular, we scrutinize how Polish listeners judge German-accented Polish versus American-accented Polish. The choice of the accents was motivated, among others, by considerably different attitudes Polish speakers expressed towards German as opposed to American people in a relatively recent national survey of attitudes conducted by a Public Opinion Research Centre (CBOS [1], 2020, N = 958 participants): 50% Poles have positive attitudes towards American people and 12% negative (30% remained indifferent and 8% did not know). In the same survey 36% Poles were positive towards Germans but 29% negative (29% indifferent, and 6% did not know). Taking the results into account the present study examines the attitudes of Polish speakers towards American and German speakers by means of indirect evidence gained from a perceptual test.

2. EXPERIMENT

2.1. Hypotheses

Polish participants are expected to prefer American accented speech over German accented speech. The more positive judgements should also be strengthened when the accented speech is accompanied by a corresponding symbol of the country (a flag).

2.2. Experimental design

To test our hypotheses two on-line perceptual experiments were conducted through SoSci Survey (Leiner [5]), an online questionnaire platform.

In both experiments, we probed how Polish listeners perceive American and German accents in Polish with the only difference being in the presence (Experiment 1) or absence of a flag (Experiment 2). The corresponding flag was displayed in the top right corner of the screen mirrored the intended accent of the recording.

Recordings of four female German speakers speaking German and American English (AE) accented Polish were included in each experiment. The speakers were asked to imitate German and American accent while speaking Polish. They were selected from a pool of 6 female speakers by two phoneticians speaking all three languages (German, Polish, and English) who paid attention to both an overall acoustic impression of the accent and their most prominent phonetic cues, e.g., the retroflex /ɹ/ in American English, absent in both German and Polish. Each speaker produced several different sentences during conversations with another speaker (two speakers pronounced stimuli with American accent and two with German accent), and forty sentences of similar length were selected and presented in each experiment. The stimuli were automatically randomized for each participant. Table 1 provides an overview of both experiments.

	Listeners	Flag	Speakers	Accent
Exp1	Polish (43)	YES	German (4)	American/ German
Exp2	Polish (47)	NO	German (4)	American/ German

Table 1: An overview of Experiment 1 and 2

The participants' task was to listen to a recording and rate the speaker on a 7-point Likert scale. Opposing adjectives were presented at the extreme ends of the scale, e.g., *serious* (left extreme point) and *not serious*

(right extreme point). No numbers were displayed on the scale.

There were eight adjectives determining the competence of the speaker (*strong, certain, serious, competent, extravert, independent, ambitious, dominant*) and seven adjectives describing their benevolence (*warm, likable, sensible, helpful, sociable, emotional, honest*; cf. Brown et al. [6] and Brown [7] for the concept of competence and benevolence). Please note that the listeners were most probably thinking that they were listening to German and American speakers while in fact they were only exposed to German speakers.

2.3. Participants

Experiment 1 yielded data from 59 listeners, 43 of whom were included in the further analysis. The average participant age was 21.3 (1.88 sd). In the second experiment data from 47 participants out of 59 were evaluated. Their average age was 21.6 (2.52 sd). Overall, the ratings from 28 participants could not be included because they either did not finish the experiment or they were not native speakers of Polish.

2.4. Statistics

All statistical analyses were conducted with R (version: 4.0.0 [8]). We used ordinal regression analysis (package "ordinal" by Christiansen [9]) to investigate the influence of LANGUAGE ACCENT, i.e., German vs. American accent in Experiment 1 (section 3.1) and Experiment 2 (section 3.2) on ANSWER [1:7]. We also included INFORMANT as a random intercept and LANGUAGE ACCENT as its slope. In addition, in a separate model (section 3.3.) we linked the results from Experiment 1 and Experiment 2 and included FLAG as a fixed factor with two levels [flag; no flag] and added the interaction LANGUAGE ACCENT * FLAG to the model. The random structure was identical as in the previous models.

7697 measurement points from Experiment 1 and 7755 from Experiment 2 were submitted to the statistical analysis.

3. RESULTS

3.1. Experiment 1

Our results show that Polish with German accent was in general rated more "positively" than American accent. This general pattern, however, slightly differed when the attitude groups were examined in detail. While Benevolence showed a clearly parallel pattern, for Competence, the ratings varied depending on the adjective, see Figure 1.

The adjectives, for which the ratings (almost) converged, were *serious*, *extravert*, *independent*, and *dominant*. Thus, it appears that Polish speakers perceived German accented participants as more benevolent (mean POL_GER 3.01 vs. mean POL_AME 3.87; $t = -7.91$, $p < .001$) and more competent than American accented participants (mean POL_GER 3.46 vs. mean POL_AME 3.78; $t = -3.77$, $p < .001$).



Figure 1: Results obtained for Polish stimuli with American and German accent split for Benevolence and Competence (presented with flags)

If we split the results according to ratings obtained for individual speakers, a slightly different picture emerges. Regarding Competence it becomes evident that one speaker with American accent was judged more negatively (mean POL_AME1 = 2.93 vs. mean POL_AME2 = 4.64; $t = -11.41$, $p < .001$); see Figure 2 (right). The two speakers with German accent were rated differently as well, although the difference was slightly smaller (mean POL_GER1 = 2.93 vs. mean POL_GER2 = 4.64; $t = -9.02$, $p < .001$).

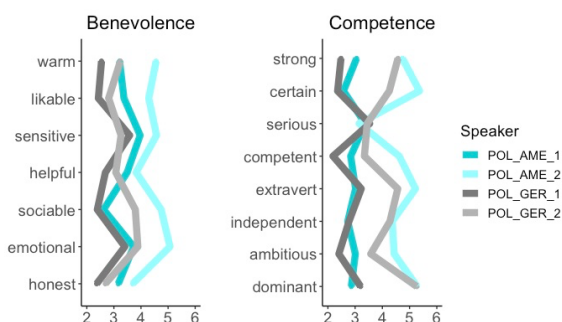


Figure 2: Results obtained for Polish stimuli with American and German accent split for Benevolence and Competence and individual speakers (with flags)

Differences between individual speakers were also found in Benevolence ratings, see Figure 2 (left). The first speaker with German accent was rated as more benevolent than the second speaker (mean POL_GER1 = 2.77 vs. mean POL_GER2 = 3.24; $t = -3.75$, $p < .001$). The difference between speakers with American accent was significant, too, whereby the

first speaker was rated as more benevolent than the second speaker (mean POL_AME1 = 3.36 vs. mean POL_AME2 = 4.39, $t = -5.47$, $p < .001$).

3.2. Experiment 2

In the second experiment, the same stimuli as in Experiment 1 were used, yet no flag was displayed on the screen. In this condition, there are again no clear patterns discernible if the results are concatenated for all adjectives. However, splitting the results according to Benevolence and Competence unveils that German accent was rated as more benevolent (mean POL_GER = 3.06 vs. mean POL_AME = 4.06, $t = -9.47$, $p < .001$) than the American accent. Figure 3 (left) shows that for Benevolence, the ratings of German and American accent do not overlap. In the case of Competence, German accent was judged more competent only with respect to five out of eight adjectives. Taken together the difference between German and American accents was still significant leading to a conclusion that German accent was perceived as more competent (mean POL_GER = 3.58 vs. mean POL_AME = 3.81, $t = -2.72$, $p < .01$; see Figure 3 (right)).



Figure 3: Results obtained for Polish stimuli with American and German accent split for Benevolence and Competence (without flags)

If we consider rankings assigned to individual speakers, considerable differences become evident. First, as far as Benevolence is concerned, both speakers with German accent were generally judged more benevolent than speakers with American accent, see

Figure 4 (left). The difference between the speakers within an accent was significant: speaker 2 with German accent was rated as less benevolent than speaker 1 (mean POL_GER1 = 2.62 vs. mean POL_GER2 = 3.42, $t = -7.53$, $p < .001$). Similarly, speaker 2 with American accent was perceived as less benevolent than speaker 1 (mean POL_AME1 = 3.58 vs. mean POL_AME2 = 4.56, $t = -7.99$, $p < .001$).

As for Competence, the speakers within the same accent were rated significantly different as well. For Competence, the differences were larger than in the

Benevolence context for German (mean POL_GER1 = 2.63 vs. mean POL_GER2 = 4.42, $t = -14.79$ $p < .001$) and American accent (mean POL_AME1 = 3.14 vs. mean POL_AME2 = 4.48, $t = -8.53$, $p < .001$); see Figure 4 (right).

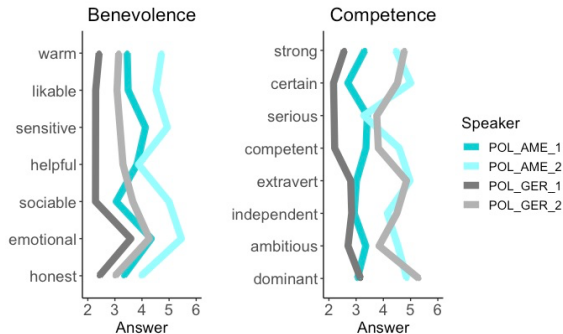


Figure 4: Results obtained for Polish stimuli with American and German accent split for Benevolence and Competence and individual speakers (without flags)

3.3. Comparison of Experiment 1 and 2

Finally, if we compare results from Experiment 1 (with flag) and 2 (without flag) there are only very small differences for both Benevolence (see Figure 5) and Competence (see Figure 6).

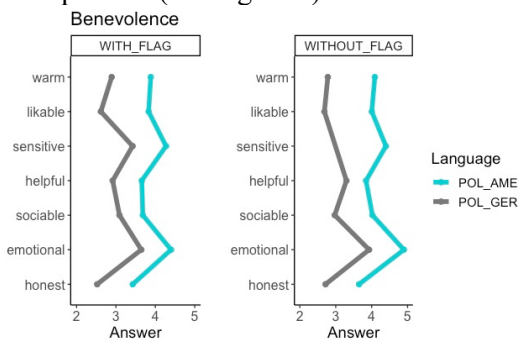


Figure 5: Comparison of results obtained for Polish stimuli with American and German accent split for flag and without-flag condition for Benevolence

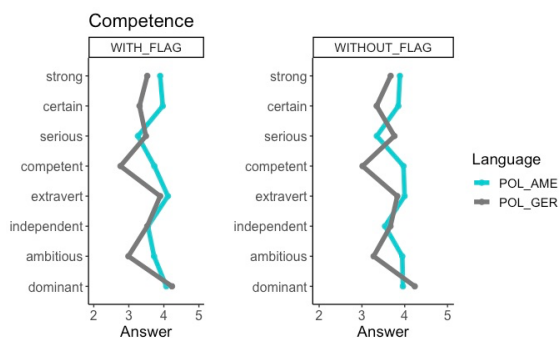


Figure 6: Comparison of results obtained for Polish stimuli with American and German accent split for flag and without-flag condition for Competence

With regard to Benevolence, the American accent was rated as more benevolent when the flag was shown but the presence of the German flag did not influence the ratings of the German accent (Flag*Language: $t = -3.52$, $p < .001$). Still, the German accent was perceived as more benevolent than the American one ($t = -10.46$, $p < .001$).

Furthermore, in the case of Competence, the influence of the flag was not significant, neither was the interaction of Flag and Language. The only significant effect was that of Language where German was rated as more competent ($t = -4.50$, $p < .001$); see Figure 6.

4. CONCLUSIONS

The aim of this study was to test attitudes towards German and American people by means of an indirect evidence, i.e. a perceptual test of the respective accented speech.

Two hypotheses have been put forward. Firstly, Polish participants prefer the American-accented version of their language to the German-accented version. This hypothesis was based on a CBOS study [1]. Secondly, we hypothesized that participants' judgements are strengthened when the accented speech is accompanied by a corresponding national symbol, that is, its flag. However, neither of these hypotheses were supported by the results.

Although Polish participants rated German-accented speakers as generally more benevolent and competent than American-accented speakers, a closer inspection of rating of individual speakers revealed a considerable variance between individual speakers within the two accent groups. Responses evoked by inter-speaker differences in voice quality may outweigh the attitudes that listeners hold towards specific accents or nationalities. In other words, while people may have preconceived notions of other nationalities, they do not rely exclusively on them when forming an opinion on an individual speaker. This finding was consistent even when participants saw the national flags.

However, there may be another explanation as to why the hypotheses were not supported. Firstly, the idea that Polish participants would rate German accented speakers more negatively originated mainly from the CBOS [1] survey. In that survey, the sample was representative of the adult population of Poland whereas the Polish participants in the present study were on average young. Therefore, it is possible that the attitudes found in the CBOS "representative" population are not as prevalent as those found among young people which in turn suggests a change of attitudes of Poles towards Germans.

Acknowledgments

Sarah Wesolek and Piotr Gulgowski were supported by the Deutsch-Polnische Wissenschaftsstiftung and Marzena Zygis by the Leibniz Society.

5. REFERENCES

- [1] CBOS. Centrum Badania Opinii Społecznej 2020. Attitude to other nationalities. CBOS [Public Opinion Research Centre]. Warsaw, Poland: CBOS.
- [2] Niedzielski, N. 1999. The effect of social information on the phonetic perception of sociolinguistic variables. *Journal of Language and Social Psychology*, 18(1), 62–85.
- [3] Hay, J., Drager, K. 2010. Stuffed toys and speech perception. *Linguistics* 48, 865-892.
- [4] Jannedy, S., Mentoza-Denton, N., Weirich, M. 2019. Social capital and the production and perception of fine phonetic detail in Berlin. In: Heyd, T., von Mengden, F., Schneider, B. (eds.) *Language and Social Life [LSL] 17*. Berlin: DeGruyter, 25-144.
- [5] Leiner, D. J. 2019. SoSci Survey (Version 3.1.06) [Computer software]. Available at <https://www.socisurvey.de>
- [6] Brown, B.L.; Strong, W.J.; Rencher, A.C. 1975. Acoustic determinants of perceptions of personality from speech. *International Journal of the Sociology of Language* 6, 11-32.
- [7] Brown, Bruce, L. 1982. Experimentelle Untersuchungen zur Personenwahrnehmung aufgrund vokaler Hinweisreize. In: Scherer, K. (ed.): *Vokale Kommunikation*. Basel: Beltz Verlag, 211-227.
- [8] R Core Team. 2020. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. Version 4.0.0. URL <https://www.R-project.org/>.
- [9] Christensen, R.H.B. 2018. Ordinal. R package. <https://cran.rproject.org/web/packages/ordinal/ordinal.pdf>.