THE EFFECT OF LANGUAGE SHAREDNESS AND VISIBILITY ON COMMUNICATIVE SUCCESS AND SPEAKER EVALUATIONS IN ZOOM MEETINGS

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Abstract

The processes of globalization and digitalization are increasing the importance of non-native interactions using ELF (English as a Lingua Franca). Due to the Covid-19 pandemic, several components of everyday life were forced to shut down. With this came an increase in use of digital-based communication technologies such as Zoom. Due to this change in dynamics, successful communication relies more and more on technology. The purpose of the present study was to investigate the reactions of shared/non-shared L1 background and visible/not visible regarding task performance (number of differences spotted & communicative success rating) and speaker evaluations (Likeability, self-perceived language proficiency, perceived language proficiency of interlocutor, competence & solidarity). In a Diapix task experiment, 34 Dutch and German participants took part in a task in which they were required to spot the differences in the pictures provided. Findings showed that participants with the shared non-visible condition rated each other higher on likeability than participants with the shared visible condition.

Introduction

The ongoing social process of globalization and worldwide digitalization are increasing the importance of non-native interactions with the use of the English language. People become increasingly aware of the fact that constraints of geography on social and cultural arrangements recede (Waters, 1995). With the increasing importance of English as a global language, the number of non-native speakers of English is still growing (Crystal, 2003). This phenomenon has led to an increasing importance and relevance of interactions between native and non-native speakers of English as well as between non-native speakers of English. With more non-native English communication around the world, research into these interactions is becoming highly relevant (Van Meurs, Hendriks & Planken, 2013). Communicative success in English differs depending on L1 language background (Almbark, Bouchhioua & Hellmuth, 2014). A common option in international communication is for interlocutors who do not share the same L1 to communicate in a non-native language (Hendriks, van Meurs & de Groot, 2017). The chosen language is usually English (ELF: English as lingua franca). The Globalized business community we live in today is becoming more and more intercultural in its nature and worldwide digitalization is increasing the importance of non-native interactions with the use of the English language. For the past 30 years, globalization and swift development of new technology have brought nations closer together (Castaneda & Bateh, 2013).

Due to the Covid-19 pandemic, multiple components of everyday life were forced to temporarily shut down to prevent the spread of the virus. This event led to increased use of digital-based communication technology (Gandasari & Dwidienawati, 2020). The biggest increase observed concerns Zoom. While only 10 million people attended meetings on Zoom before the end of 2019, 300 million people attended meetings by the end of April 2020. The technology provided made it possible for universities and businesses to continue operating while maintaining physical distance (Wieberhold, 2020). Due to this change of dynamics, successful communication relied more and more on technology whereas this first predominantly came down to face-to-face interactions.

Present Study

The main purpose of the present study is to investigate language sharedness and visibility regarding task performance (number of differences spotted & communicative success rating) and speaker evaluations (Likeability, self-perceived language proficiency, perceived language proficiency of interlocutor, competence & solidarity). In order to investigate the above,

elaboration on interactive alignment theory (Pickering & Garrod, 2006), Communication Accommodation Theory (Gallois & Giles, 2015) and grounding (Clark & Brennan, 1991) is required.

Theoretical framework

Communication is the discriminatory response of an organism to a stimulus (Stevens, 1950), the latter occurs when some environmental disturbance (stimulus) impinges on an organism and the organism does something about it (makes a discriminatory response). If the stimulus is ignored by the organism, there has been no case of communication. This "contact" is an important facet of the interactive alignment theory of Pickering and Garrod (2006). According to Pickering and Garrod (2006), successful communication relies on alignment. Successful communication goes hand in hand with development of similar representations between interlocutors. Interactive alignment theory assumes that communication is successful to the extent to which interlocutors understand important facets of the world in a similar manner. Interlocutors align their portrayal of the situation trough their interaction (Garrod & Pickering, 2009). Alignment between interlocutors is primarily achieved when people accommodate their language use to one another. This occurs due to interlocutors' similar language processing and due to the shared relevant background knowledge. Alignment can be achieved on various linguistic levels such as grammar, words, sound and visibility.

      Another theory closely intertwined with interactive alignment is Communication Accommodation Theory (CAT). One of the most important aspects of CAT (and similar to alignment) is grounding. To reach belief of mutual understanding, fellow interactants are required to understand each other well enough for current purposes (Clark & Brennan, 1991; Clark & Krych, 2004). Conversation is proposed to have two phases, the first one being the presentation phase and the second acceptance. When moving from the first to the second phase, interlocutors are required to display mutual understanding regarding each other's communication. In case of no understanding, interlocutors are prescribed to work together until grounding is achieved (Clark & Brennan, 1991). Furthermore, communication accommodation theory focuses on the patterns of convergence, divergence and maintenance of communication behaviors, notably as they relate to personal goals such as social approval, identity and communication efficiency (Gallois & Giles, 2015). Convergence happens when interlocutors try to make another understand the communication better by slowing the speed of speaking, simplifying grammatical structures and using clear pronunciation. Divergence occurs when an interlocutor tends to complicate the communication while maintenance

concerns communication between interlocutors without any special change to facilitate understanding (Gallois, Ogay & Giles, 2005; Dragojevic, Gasiorek & Giles, 2016). Communicators use convergence to look more friendly and likeable while divergence is employed to look more superior and accentuate dissimilarities (Giles, 2016).

The degree of accommodation behavior is based on social identity theory. Social identity's central tenet is that group behavior arises from a shared sense of social category membership (Tajfel & Turner, 1979). Younger people desire more positive concepts from themselves with interlocutors from their in-group and require more positive reinforcement from peers (convergence) than people who are older (McCann & Giles, 2007).

In order to achieve connection between conversational partners in face-to-face communication, socio-emotional signals are required. Research conducted by Okdie, Guadagno, Bernieri, Geers and Mclarney-Vesotski (2011) confirmed that participants who conversed face-to-face with their partner reported more positive impressions of their partners than participants who did not. Visibility also has another effect on conversation. Interlocutors will use gestures at a higher frequency when they speak to visible interlocutors compared to a lower frequency when addressing someone through an intercom or telephone (Bavelas, Chovil, Lawrie & Wade, 1992; Emmorey & Casey, 2001). Clark and Brennan (1991) outlined cues that media should entail. The dimensions used to describe various media include: copresence (in the same environment), visibility (visible to each other), audibility (speech), contemporality (message received immediately), simultaneity (both speakers can send and receive), sequentiality (turns cannot get out of sequence), reviewability (able to review other's messages) and revisability (can revise messages before they are sent). Tinkering with the dimensions above can impede communicative success and common ground between interlocutors. For Zoom meetings, visibility (use or no use of camera) will influence communicative success as no visibility will influence the use of visual backchannel responses. This backchanneling is important as it confirms convergence or divergence between interlocutors in conversation (Gallois & Giles, 2015).

Besides visibility, language sharedness (same or different L1) can also influence communicative success between interlocutors. Empirical evidence shows that familiarity with the speech improves comprehension (Gass & Varonis, 1984). If someone is used to and familiar with German accented English, comprehension of the speech will not be hampered.

To investigate the considerations above, the following research question is stated:

RQ1: To what extent do interactions between shared/non-shared L1 participants with visibility (visible/not visible) as a factor differ regarding task performance (number of differences spotted & communicative success rating)

Besides the task performance of the interlocutors, additional attitudinal evaluations such as likeability (Nejjari, Gerritsen, van der Haagen & Korzilius, 2012), competence (Council of Europe, 2001) and solidarity (Fuertes, Gottdiener, Martin, Gilbert & Giles, 2012) are researched.

Likeability or "Affect" (Nejjari et al, 2012) entails the listener's feelings of pleasure towards the other participant of the conversation. Cargile and Giles (1997) reported that listeners have a higher affect towards native speakers of a language than when listening to a non-native speaker. Lindemann (2002) and Pihko (1997) show that negative attitudes also impact communication strategies used by native speakers as they tend to interrupt speakers with lower language proficiency more often than those with higher language proficiency.

Competence (Council of Europe, 2001) is based on the CEFR proficiency levels. These levels entail understanding, speaking and writing and are named under the CECR3.3 self-assessment grid. Research by Hendriks, van Meurs and de Groot (2017) showed that competence ranked lower when Dutch accent strength in French, German and Spanish was strong.

Solidarity, as researched by Fuertes et al. (2012), entails the evaluations of the speaker's similarity to the listener, attractiveness, benevolence and trustworthiness. Previous research showed that non-standard language varieties are evaluated less favorably om competence and likeability (Nejjari et al, 2012; Lindemann, 2002; Pihko, 1997; Cargile & Giles, 1997). However, research by Gluszek & Dovidio (2010) and Giles (1973) has shown that this is not consistently the case for solidarity. Depending on the kind of accent, non-standard speakers can be upgraded in their evaluation due to "covert prestige" (Trudgill, 1974).

To investigate the considerations above, the following research question is stated:

RQ2: To what extent do interactions between shared/non-shared L1 participants with visibility (visible/not visible) as a factor differ regarding speaker evaluations (likeability / self-perceived language proficiency / perceived language proficiency of interlocutor / competence / solidarity)

To investigate grounding among a public, a cooperative task is required. The most widely used approach is the map task as used by Brown, Anderson, Yule and Shillcock (1983). However, research by Forsyth, Clarke and Lam (2008) found that unequal talk spans within the map task negatively correlated with task success. An alternative is the Diapix task by Van Engen, Baese-Berk, Baker, Choi, Kim and Bradlow (2010). In this task participants are required to use a wide range of linguistic structures to identify differences between two received pictures.

The main purpose of the present study is to investigate the reactions of shared/non-shared L1 background and visible/not visible regarding task performance (number of differences spotted & communicative success rating) and speaker evaluations (Likeability, self-perceived language proficiency, perceived language proficiency of interlocutor, competence & solidarity).

Methodology

Design

The design of the study was a 2 x 2 (shared / nonshared L1 & visible / non visible) between subject design in which the 34 participants (who formed 17 duos) were divided into four categories: shared visible, non-shared visible, shared non visible and non-shared non visible. To examine to what extent interactions between shared/nonshared L1 participants with visibility as a factor differed regarding task performance and speaker evaluations, Dutch and German respondents between the age of 19 and 26 were selected and asked to perform a Diapix task (Van Engen et al, 2010) via zoom. The interlocutors were asked to perform the task using English as a lingua franca. The factor visibility was incorporated in the experiment by eliminating the use of the camera for several participants during the Zoom-session. After performing the Diapix task, the interlocutors were asked to fill out a Qualtrics questionnaire that incorporated questions about the communicative success (task performance & speaker evaluations).

Materials

The onset of a Diapix task in a Zoom-meeting was used. The content of the Zoom-meeting between Dutch or German interlocutors entailed a Diapix task in which they were asked to work together in ELF to discuss and determine all possible differences of the Diapix task. Following the Diapix task in Zoom, a Qualtrics questionnaire was filled out.

Instrumentation

Task performance was measured in the present study by assessing the correct number of differences spotted in the Diapix task and assessing the communicative success rating. The self-perceived communicative success rating was measured using six five-point Likert scales (completely disagree – completely agree) based on Kootstra and students (2021). The items being: 'The conversation with this person went smoothly', 'Talking to this person was easy', 'I think this person understood what is was saying', 'I understood what this person was saying', 'There were no misunderstandings', 'I was able to help the other person when they were, for instance, stuck'. The reliability of self-perceived communicative success comprising five items was acceptable: $\alpha = .77$. Regarding the speaker evaluations, likeability was measured using three seven-point Likert scales (completely disagree – completely agree) based on Nejjari et al. (2012). The items being (I consider this person to be): 'considerate', 'pleasant' and 'friendly'. The reliability of likeability comprising three items was good: $\alpha =$

.89. Competence was measured using CEFR proficiency levels as developed by the Council of Europe (2001). The reliability of competence comprising two items was excellent: α = .90. Solidarity was measured using four seven-point Likert scales (completely disagree – completely agree) based on Fuertes et al. (2012). The items being: 'Similarity', 'Cooperativeness', 'Benevolence' and 'Trustworthiness'. The reliability of solidarity comprising four items was acceptable: α = .74. Self-perceived language proficiency was measured using four seven-point Likert scales (poor – excellent) measured the items: speaking, writing, reading and listening. The perceived language proficiency of the interlocutor was measured using the same scales as mentioned for the self-perceived language proficiency. The reliability of self-perceived language proficiency comprising four items was excellent: α = .96. Other background variables were age, gender and education, which were all answered utilizing drop down menus in the questionnaire.

Participants

The total number of participants for this experiment was 34. This grand total was made up of 17 Dutch (50%) and 17 German (50%) respondents. No students of English were used as no extremities in proficiency were required. The participants were all between the age of 19 and 26 ($M = 22.06$, $SD = 1.89$). From the total of 34 respondents, 10 were male (29.4%), 23 female (67.6%) and 1 unspecified (3%). Regarding education 3 participants attended pre university education / VWO (8.8%), 5 attended higher vocational education / HBO (14.7%), 25 attended academic education / WO (73.5%) and 1 "other" (3%).

A Chi-square test showed no significant relation between gender and language sharedness ($\chi2(2) = 0.76$, $p = .685$) and a significant relation between gender and visibility condition ($\chi2(2) = 7.67$, $p = .022$). There were more female participants in the visible condition (52.9%) than male (8.8%). Table 1 displays the results below.

Table 1.   Percentages and *n* for age on language sharedness and visibility

	Male	Female	Other	Total
Shared	*n* = 4	*n* = 10	*n* = 0	*n* = 14
	11.8%	29.4%	0.0%	41.2%
Non-shared	*n* = 6	*n* = 13	*n* = 1	*n* = 20
	17.6%	38.2%	2.9%	58.8%
Total	*n* = 10	*n* = 23	*n* = 1	*n* = 34
	29.4%	67.6%	2.9%	100%
Visible	*n* = 3	*n* = 18	*n* = 1	*n* = 22
	8.8%	52.9%	2.9%	64.7%
Non-visible	*n* = 7	*n* = 5	*n* = 0	*n* = 12
	20.6%	14.7%	0.0%	35.3%
Total	*n* = 10	*n* = 23	*n* = 1	*n* = 34
	29.4%	67.6%	2.9%	100%

Another Chi-square test showed no significant relation between education and language sharedness ($\chi 2(3)$ = 3.16, *p* = .306) and no significant relation between education and visibility condition ($\chi 2(3)$ = 2.36, *p* = .502). Table 2 displays the results below.

Table 2.   Percentages and *n* for education on language sharedness and visibility

	VWO	HBO	WO	Other	Total
Shared	*n* = 0	*n* = 3	*n* = 11	*n* = 0	*n* = 14
	0.0%	8.8%	32.4%	0.0%	41.2%
Non-shared	*n* = 3	*n* = 2	*n* = 14	*n* = 1	*n* = 20
	8.8%	5.9%	41.2%	2.9%	58.8%
Total	*n* = 3	*n* = 5	*n* = 25	*n* = 1	*n* = 34
	8.8%	14.7%	73.5%	2.9%	100%
Visible	*n* = 1	*n* = 4	*n* = 16	*n* = 1	*n* = 22
	2.9%	11.8%	47.1%	2.9%	64.7%
Non-visible	*n* = 2	*n* = 1	*n* = 9	*n* = 0	*n* = 12
	5.8%	2.9%	26.5%	0.0%	35.3%
Total	*n* = 3	*n* = 5	*n* = 25	*n* = 1	*n* = 34
	8.8%	14.7%	73.5%	2.9%	100%

Note: VWO = pre-university, HBO = higher vocational education & WO = academic education

A one-way analysis of variance showed a significant effect of participant condition on self-assessed proficiency (F (3, 30) = 5,04, p = .006). The self-assessed proficiency of the visual shared language condition (M = 3.84, SD = 1.63) was lower than that of the visual non-shared language condition (p = .017, Bonferroni correction; M = 5.21, SD = 0.60) and non-visual shared language participant condition (p = .012, Bonferroni correction; M = 5.58, SD = 0.49). No other significant differences were found between the conditions (p's > .062, Bonferroni correction).

A one-way analysis of variance showed no significant effect of participant condition on age (F (3, 30) <1).

Procedure

The performing of the Diapix task was done via zoom from the location the participants and researchers found themselves in at that moment in time (mostly at a distance due to Covid-19 measures). There was always another person present during the meeting (2nd researcher) to make sure the requirements were met regarding the language spoken and success of the task. First, both researchers entered the main room together. Both participants entered the room with their username set to their participant number (which they received in the confirmation e-mail (Appendix 1)). After a short introduction, both participants were put into breakout rooms with 2 minutes to look at the picture (street A and street B from Diapix material (Appendix 2)). Both participants were put back into the main room and were given 5 minutes to discuss the pictures and spot the differences. Meanwhile the researchers had their camera and microphone turned off and took notes on the differences uttered by the participants, which were later added to the data file as "number of differences spotted". After 5 minutes the researchers put the participants back into the breakout rooms to fill in the final questionnaire. Conclusively, the researchers thanked the participants for taking part in the experiment. The questionnaire that followed the Zoom-meeting was conducted online using the aid of Qualtrics. First, information about the questionnaire was stated such as the content, duration and consent. Participation was voluntary and the gathered information would remain confidential. Zoom sessions were not recorded. The experiment step by step is included as appendix 3.

Statistical treatment

Two-way analyses of variance were used for task performance and speaker evaluations. Finally, to assess the relationship between the dependent variables, a correlation analyses was conducted.

Results

Sample analysis of differences spotted

A two-way analysis of variance with visibility and language sharedness as factors showed no significant main effect of language sharedness on differences spotted ($F (1, 30) < 1$, $p = .489$). Visibility was not found to have a significant main effect on differences spotted ($F (1, 30) < 1$, $p = .410$). The interaction effect between visibility and language sharedness was not statistically significant ($F (1, 30) < 1$, $p = .871$). Table 3 displays the descriptives for all of the following variables.

Sample analysis of communicative success

A two-way analysis of variance with visibility and language sharedness as factors showed no significant main effect of language sharedness on communicative success ($F (1, 30) = 1.20$, $p = .283$). Visibility was not found to have a significant main effect on communicative success ($F (1, 30) = 1.97$, $p = .171$). The interaction effect between visibility and language sharedness was not significant ($F (1, 30) < 1$, $p = .584$).

Sample analysis of Likeability

A two-way analysis of variance with visibility and language sharedness as factors showed a significant main effect of visibility on likeability ($F (1, 30) = 4.55$, $p = .041$). Language sharedness was not found to have a significant main effect on likeability ($F (1, 30) < 1$, $p = .347$). The interaction effect between visibility and language sharedness was statistically significant ($F (1, 30) = 9.09$, $p = .005$).

Separate one-way analyses of variance for visibility of the participants showed that the effect of language sharedness was significant for the visible group ($F (1, 20) = 8.34$, $p = .009$), but not for the non-visible group ($F (1, 10) = 3.75$, $p = .082$). Participants within the shared non-visible condition ($M = 7.00$, $SD = 0.00$) rated each other higher on likeability than those in the shared visible condition ($M = 6.17$, $SD = .73$).

Separate one-way analyses of variance for language sharedness of the participants showed that the effect of visibility was significant for the shared language group ($F (1, 12) =$

7.56, $p = .018$), but not significant for the non-shared group ($F (1, 18) < 1, p = .409$). Participants within the shared non- visible group ($M = 7.00, SD = 0.00$) rated each other higher on likeability than the participants within the shared visible group ($M = 6.17, SD = .73$).

Sample analysis of Solidarity

A two-way analysis of variance with visibility and language sharedness as factors showed no significant main effect of visibility on solidarity ($F (1, 30) = 2.77, p = .107$). Language sharedness was not found to have a significant main effect on likeability ($F (1, 30) < 1, p = .644$). The interaction effect between visibility and language sharedness was not statistically significant ($F (1, 30) = 2.77, p = .107$).

Sample analysis of Competence

A two-way analysis of variance with visibility and language sharedness as factors showed no significant main effect of visibility on competence ($F (1, 30) < 1, p = .612$). Language sharedness was not found to have a significant main effect on competence ($F (1, 30) < 1, p = .709$). The interaction effect between visibility and language sharedness was not statistically significant ($F (1, 30) = 1.55, p = .222$).

Table 3.　　Means, standard deviations and *n* for differences spotted, communicative success, likeability, solidarity and competence in function of experimental condition (V-S = visible/shared L1, V-NS = visible/non shared L1, NV-S = non visible/shared L1 & NV-NS = non visible/non shared L1) (1 = lowest score, 7 = highest score)

	V-S			V-NS			NV-S			NV-NS		
	M	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*
Differences spotted	3.75	2.32	8	4.29	1.33	14	3.33	2.25	6	3.67	0.52	6
Comm-success	5.75	0.98	8	6.16	0.57	14	6.23	0.75	6	6.37	0.15	6
Likeability	6.17	0.73	8	6.81	0.31	14	7.00	0.00	6	6.67	0.42	6
Solidarity	5.66	1.05	8	6.25	0.72	14	6.58	0.61	6	6.25	0.50	6
Competence	4.88	1.03	8	5.14	0.77	14	5.42	0.66	6	4.92	0.92	6

Correlation analysis

Table 4 shows the correlations between solidarity, competence, likeability, communicative success, and self-assessed proficiency. A significant positive correlation was found between solidarity and competence (r (30) = .35, p = .042). The solidarity of the participants increased with the competence of the participants. A significant positive correlation was found between competence and communicative success (r (30) = .38, p = .025). The communicative success between participants increased with the competence of the participants. A significant positive correlation was found between solidarity and likeability (r (30) = .66, p < .005). The likeability of the participants increased with the solidarity of the participants. A significant positive correlation was found between solidarity and communicative success (r (30) = .64, p < .005). The communicative success of the interaction increased with the solidarity of the participants. Finally, a significant positive correlation was found between communicative success and likeability (r (30) = .50, p < .005). The communicative success of the interaction increased with the likeability of the participants.

Table 4.　　Correlations (r) between solidarity, competence, likeability, communicative success and self-assessed proficiency (N = 30)

Variable	Competence	Solidarity	Likeability	Comm-Success
Solidarity	.35*			
Likeability	.28	.66**		
Comm-Success	.38*	.64**	.50**	
SA-Proficiency	.32	.19	.21	.26

* p < .050, ** p < .010

Conclusion & Discussion

The aim of the study was to determine whether language sharedness and visibility influenced task performance (number of differences spotted & communicative success) and speaker evaluations (likeability, self-perceived language proficiency, perceived language proficiency of the interlocutor, competence & solidarity). The main findings show that visibility only had a significant effect on likeability. Participant within the shared non-visible condition rated each other higher on likeability than participants within the shared visible condition.

Regarding the demographics of the study, several significant results were found. Firstly, there were significantly more female participants in the visible condition than male participants. Secondly, the self-assessed English language proficiency of the visual shared language condition was lower than the visual non-shared language condition and non-visual shared language condition.

The performed correlation analysis showed that as competence increased, solidarity and communicative success also increased. When solidarity increased, likeability and communicative success did so as well and when likeability increased so did communicative success.

The first research question concerned to what extent interactions between shared/non-shared L1 participants with visibility (visible/not visible) as a factor differ regarding task performance (number of differences spotted & communicative success rating). Findings for number of differences spotted and communicative success showed no differences between the experimental conditions. Earlier research showed that communicative success relies on alignment (Pickering & Garrod, 2006). This occurs due to interlocutors' similar language processing and due to the shared relevant background knowledge. For the present study, this means that the participants did not differ regarding task performance and were all able to successfully communicate and align their communicative performance. Furthermore, participants of the experiment all showed to be communicatively successful (Table 3). This means that the mutual understanding between interlocutors was high and grounding (Clark & Brennan, 1991; Clark & Kyrch, 2004) and convergence (Gallois & Giles, 2015) was achieved (Clark & Brennan, 1991; Clark & Kyrch, 2004). Research also showed that face-to-face conversations would report more positive impressions of the interlocutors (Okdie, Guadagno, Bernieri, Geers and Mclarney-Vesotski, 2011). Visibility, more specific, the lack of visibility influences the visual backchannel responses (Gallois & Giles, 2015). This is not in line with the results of the present study as visibility did not hamper the communicative success of the interlocutors during the experiment.

The second research question concerned to what extent interactions between shared/non-shared L1 participants with visibility (visible/not visible) as a factor differ regarding speaker evaluations (likeability / self-perceived language proficiency / perceived language proficiency of interlocutor / competence / solidarity). The findings of this study are not in line with research regarding speaker evaluations. Visibility had an effect on likeability where shared non-visible participants rated each other higher than shared-visible participants. Firstly, this is not in line with earlier research which stated that likeability would increase when interlocutors were visible to one another and would be more likely to "ground" accommodate communication to each other (Gallois & Giles, 2015; Okdie, Guadagno, Bernieri, Geers and Mclarney-Vesotski, 2011). Results for competence and solidarity showed no differences between the experimental conditions. Competence scores among the participants did not differ significantly. Previous research showed that competence ranked lower when accent strength was strong (Hendriks et al, 2017), which was not the case in the present study.

Limitations

The primary limitation of the current study is the sample size and with that the division of participants among the experimental conditions and among gender. The visible non-shared group consisted of 14 participants while the non-visible shared and non-visible non-shared groups consisted of 6 participants each. Another limitation is the language background of the participants. The Dutch and German language are comparable on a global scale and might be a cause of the results found in the present study (Koster, 1975). The participants of the study all had a high level of education which came with a fairly high proficiency of English. This concurs with research which showed that somewhat native accents were found to be more intelligible and comprehensible than non-native accents (Nejjari et al, 2012).

Future research

The first recommendation for future research is to repeat the experiment with a bigger sample size and equal division among the experimental conditions. Furthermore, cultural differences are not examined in this study. A recommendation for future research would be looking into cultural differences and using L1 speakers that are not likely to be familiar with each other's L1. A strong non-native accent does not necessarily comprise intelligibility, but some instances show that non-native accents do influence intelligibility in certain cultural circumstances (Derwing & Munro, 1997). Strong non-native accents can also have a negative

effect on the perception of non-native listeners (Roessel, Schoel, Zimmermann & Stahlberg, 2017) and non-native listeners rate strong non-native accents more negatively on comprehensibility, intelligibility, status, competence and friendliness (Hendriks et al, 2017; Nejjari et al, 2012).

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Appendix 1.

E-mail text:

Dear participant,

Thank you for taking part in this experiment for our Bachelor thesis. Your participation is greatly appreciated. Please read this email carefully, since it contains important information for the experiment.

With this Email, we also want to inform you again that for the purpose of this study, the Zoom sessions will be recorded, the data will be handled confidentially, and your participation is voluntary. You are free to withdraw at any time, without giving a reason and without cost. When you participate in this study, you will be asked to complete a collaborative task in an online setting. After you complete the task, you will be asked to complete one more questionnaire.

Your Zoom meeting will take place on the following date and time:

...

You can use the following link to enter the meeting:

...

You have been assigned the following **participant ID**: ...

Please note this ID down since you will need it in the Zoom call.

Please make sure to enter the meeting on time and prepare a few minutes before it starts.

If you do not have a Zoom account, it is not necessary to download the application and create an account. The link will work either way. However, make sure that you join via a computer, not your phone. You should be in a quiet place where you cannot be disturbed. When you enter the meeting, your camera and microphone will be turned off. Please do not switch these on unless the researcher tells you to do so.

To ensure anonymity, please change your name that will be displayed on Zoom to your participant ID. If you have a Zoom account, you can do that beforehand via settings by:

1. Signing in to the Zoom web portal.
2. Click Profile in the left sidebar.
3. Click Edit, located to the right of your name.

4. Enter your participant ID in "Display Name".

5. Make sure to save the change of settings.

If you do not have a zoom account or couldn't change your name beforehand, we will ensure that the participants will join the Zoom meeting individually and can be guided by the present researchers to change their display names.

For the experiment, you will require a pen and a sheet of paper to make some notes.

Other than that, you do not need to do anything or bring anything else.

For questions or problems regarding your appointment please contact Merle Pfitzner (merle.pfitzner@ru.nl) for German participants and Annick van Moerkerk (annick.vanmoerkerk@ru.nl) for Dutch participants. However, we hope that there will be no schedule changes since this would lead to a delay and scheduling problems for other participants.

Please confirm that you read this mail and will be present at the appointment on the given time and date by simply replying with 'confirmed' to this Email.
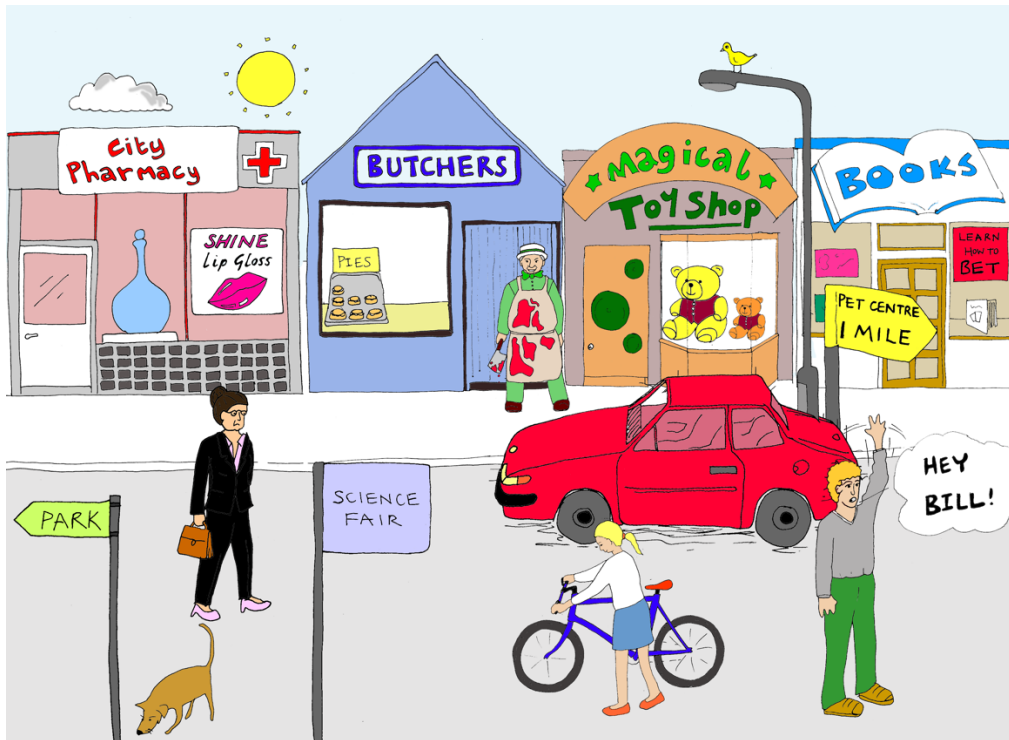

We expect to see you soon and hope you stay healthy.
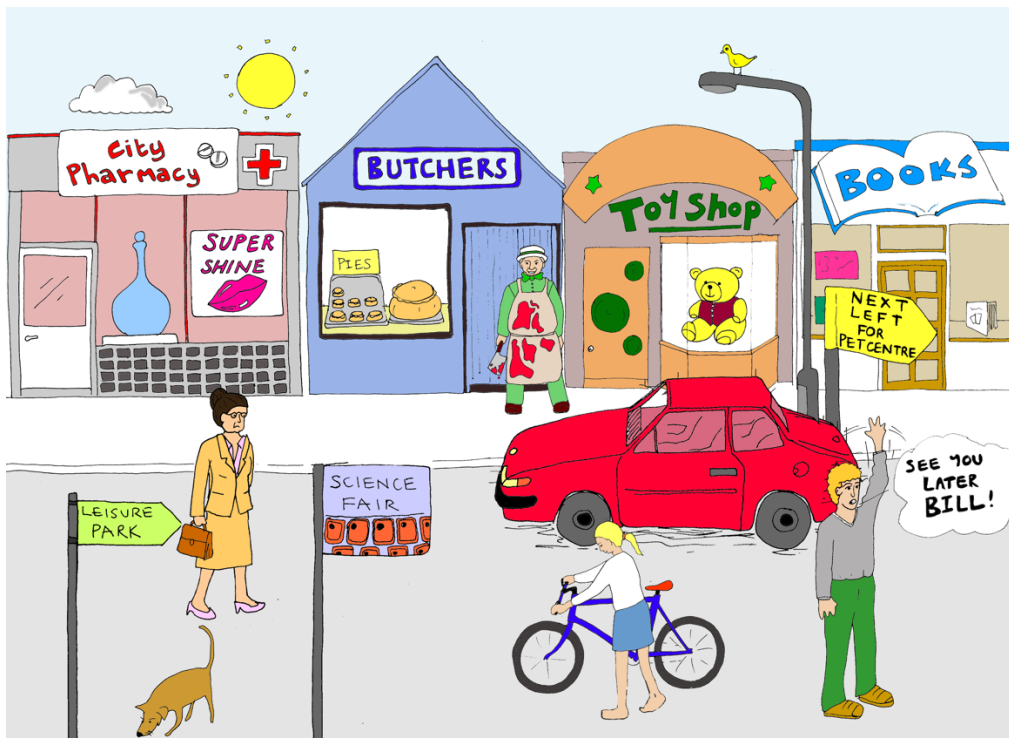

Kind regards from our research team,

Annick van Moerkerk, Linde Heinsius, Thijs Meerveld, Tom Kleisterlee & Merle Pfitzner

Appendix 2

Street A:

Street B:

Appendix 3

Experiment step by step

1. **Enter the main room together with the other research colleague**

2. **Make sure you have your <mark>camera on</mark>, but can't see your name on ZOOM**

3. **Let the participants in the ZOOM meeting on the agreed time.**

   (But let them enter individually and put them into breakout rooms for the sake of the Display name changing to their participant ID.)

4. **Speak the text underneath out loud:**

First part, main room:

Hello, and thank you both for joining today's experiment. Please do not switch your camera or microphone on if not indicated by us.

(both researchers shortly introduce themselves by name)

My research colleague and I will guide you through today's experiment. This session will be recorded, and the experiment will be conducted in English. [Participant ID person 1], you have a [Dutch/German] nationality, and [Participant ID person 2], you have (also) a [Dutch/German] nationality.

Together the two of you will perform a 'spot the differences' task. For that, we will shortly divide you into two breakout rooms and show you both a different picture. You will have 2 minutes to look at the picture and take notes. Afterwards, you'll be put back in the main room and have 5 minutes to compare the images and find the differences. As this is in no way a test and there are no right or wrong answers, please do not take any pictures of the images or cheat in any other way.

If everything is clear, please indicate so via the chat function.

Okay, we will now go into the breakout rooms.

5. **Put the participants in 2 seperate breakout rooms.**

6. **One researcher will enter break-out room 1 with <mark>no camera</mark> on and the other researcher will enter break-out room 2 with no camera on.**

7. **One researcher shows participant 1 picture <mark>(Street 3A</mark>), sets the time and tells them they can start looking and make notes, while the other researcher does the same for the other participant while showing picture <mark>Street 3B</mark>. (BO-room1 = A, BO-room2 = B)**

8. **After the <mark>2 minutes</mark> the researchers will speak the following text out loud:**

Second part, in the breakout rooms:

Okay, your time is up now. We will now return to the main room.

> **9. Make sure you text the host via Whatsapp so he/she can put you back in the main room**

In the main room:

So you both saw a picture for 2 minutes. We will start the recording now. Now you both can start on the 'spot the differences' task. We will turn off our cameras and will not intervene during the experiment. We will let you know when your time is up and you're finished.

> **9. START RECORDING → "Technical researcher" does this; START TIMER → "Talking host" does this**

> **10. Put the participant back in the main room and make sure you have your camera and microphone off (*hide self option*).**

> **11. The participants now have 5 minutes to discuss the differences they saw in the pictures.**

> **12. Mark the differences they spot.**

> **13. After 5 minutes speak the following text out loud:**

Final part, after the experiment:

Thank you, your time is up now. Please do not leave the session just yet. Soon you will going back in a break out room. In the chat in the breakout room, you will find a link to a follow-up questionnaire that will take approximately 5 minutes to fill in.

> **14. END RECORDING**

> **15. Put the participants back in separate break-out rooms and send the link for the questionnaire.**

> https://radboudletteren.eu.qualtrics.com/jfe/form/SV_3Eo2DktQjbG288m

> **16. Make sure your camera is still of and wait for the participant to fill it in.**

> **17. When the participant is done, thank them again and they can leave.**

> **18. Go back into the main room and wait for the other researcher.**

> **19. End of experiment.**

Checklist EACH (version 1.6, november 2020)

You fill in the questions by clicking on the square next to the chosen answer ☐
After clicking, a cross will appear in this square ☒

1. Is a health care institution involved in the research?
Explanation: A health care institution is involved if one of the following (A/B/C) is the case:

A. One or more employees of a health care institution is/are involved in the research as principle or in the carrying out or execution of the research.
B. The research takes place within the walls of the health care institution and should, following the nature of the research, generally not be carried out outside the institution.
C. Patients / clients of the health care institution participate in the research (in the form of treatment).

    ☒ No → continue with questionnaire

    ☐ Yes → Did a Dutch Medical Institutional Review Board (MIRB) decide that the Wet Medisch Onderzoek (Medical Research Involving Human Subjects Act) is not applicable?
    ☐ Yes → continue with questionnaire
    ☐ No → This application should be reviewed by a Medical Institutional Review Board, for example, the Dutch [CMO Regio Arnhem Nijmegen](#) → end of checklist

2. Do grant providers wish the protocol to be assessed by a recognised MIRB?

    ☒ No → continue with questionnaire

    ☐ Yes → This application should be reviewed by a Medical Institutional Review Board, for example, the Dutch [CMO Regio Arnhem Nijmegen](#) → end of checklist

3. Does the research include [medical-scientific research](#) that might carry risks for the participant?
    ☒ No → continue with questionnaire

    ☐ Yes → This application should be reviewed by a Medical Institutional Review Board, for example, the Dutch [CMO Regio Arnhem Nijmegen](#) → end of checklist

Standard research method

4. Does this research fall under one of the stated [standard research methods](#) of the Faculty of Arts or the Faculty of Philosophy, Theology and Religious Studies?
    ☒ Yes → Questionnaire & Experiment **(fill in name and number of standard research method)** → continue with questionnaire
    ☐ No → assessment necessary, end of checklist

Participants

5. Is the participant population a healthy one?
    ☒ Yes → continue with questionnaire

☐ No → assessment necessary, end of checklist → [go to assessment procedure](#)

6. Will the research be conducted amongst minors (<16 years of age) or amongst (legally) incapable persons?

      ☐ Yes → assessment necessary, end of checklist → [go to assessment procedure](#)

      ☒ No → continue with questionnaire

Method

7. Is a method used that makes it possible to produce a coincidental finding that the participant should be informed of?

      ☐ Yes → assessment necessary, end of checklist → [go to assessment procedure](#)

      ☒ No → continue with questionnaire

8. Will participants undergo treatment or are they asked to perform certain behaviours that can lead to discomfort?

      ☐ Yes → assessment necessary, end of checklist → [go to assessment procedure](#)

      ☒ No → continue with questionnaire

9. Are the estimated risks connected to the research minimal?

      ☐ No → assessment necessary, end of checklist → [go to assessment procedure](#)

      ☒ Yes → continue with questionnaire

10. Are the participants offered a different compensation than the usual one?

      ☐ Yes → assessment necessary, end of checklist → [go to assessment procedure](#)

      ☒ No → continue with questionnaire

11. Should [deception](#) take place, does the procedure meet the standard requirements?

      ☐ No → assessment necessary, end of checklist → [go to assessment procedure](#)

      ☒ Yes → continue with questionnaire

12. Are the standard regulations regarding [anonymity and privacy](#) met?

      ☐ No → assessment necessary, end of checklist → [go to assessment procedure](#)

      ☒ Yes → continue with questionnaire

Conducting the research

13. Will the research be carried out at an external location (such as a school, hospital)?

      ☒ No → continue with questionnaire

      ☐ Yes→ Do you have/will you receive written permission from this institution?

            ☐ No → assessment necessary, end of checklist → [go to assessment procedure](#)

            ☐ Yes → continue with questionnaire

14. Is there a contact person to whom participants can turn to with questions regarding the research and are they informed of this?

       ☐ No → assessment necessary, end of checklist → [go to assessment procedure](#)

       ☒ Yes → continue with questionnaire

15. Is it clear for participants where they can file complaints with regard to participating in the research and how these complaints will be dealt with?

       ☐ No→ assessment necessary, end of checklist → [go to assessment procedure](#)

       ☒ Yes → continue with questionnaire

16. Are the participants free to participate in the research, and to stop at any given point, whenever and for whatever reason they should wish to do so?

       ☐ No→ assessment necessary, end of checklist → [go to assessment procedure](#)

       ☒ Yes → continue with questionnaire

17. Before participating, are participants informed by means of an information document about the aim, nature and risks and objections of the study? (zie [explanation on informed consent](#) and [sample documents)](#).

       ☐ No→ assessment necessary, end of checklist → [go to assessment procedure](#)

       ☒ Yes → continue with questionnaire

18. Do participants and/or their representatives sign a consent form? (zie [explanation on informed consent](#) and [sample documents](#).

       ☐ No→ assessment necessary, end of checklist → [go to assessment procedure](#)

       ☒ Yes → checklist finished

If you want to record the results of this checklist, please save the completed file.

If you need approval from the EACH due to the requirement of a publisher or research grant provider, you will have to follow the formal assessment procedure of the EACH.

Declaration of no fraud and plagiarism – Bachelor's thesis

Print and sign this *Declaration of no fraud and plagiarism* form and add it as the last appendix in the final version of the Bachelor's thesis that is submitted as a hard copy to the first supervisor.

Student
[First Name, last name, student number],

Tom Kleisterlee, 4110560

Bachelor student of Communication and Information Studies at the Faculty of Arts of the Radboud University in Nijmegen, declares the following by signing this form:

a. I hereby declare that I am familiar with the faculty manual (http://www.ru.nl/stip/english/rules-regulations/fraud-plagiarism/) and with Article 16 "Fraud and plagiarism" in the Education and Examination Regulations for the Bachelor's programme of Communication and Information Studies.

b. I also declare that I have only submitted text written in my own words and that I have applied the rules of citing, paraphrasing, and referencing according to the Vademecum Reporting Research. I have acknowledged all material and sources used in its preparation, whether they be books, articles, reports, lecture notes, and any other kind of documentation.

c. I certify that this thesis is my own work, and that I have not submitted work that I have previously (in part) submitted for any other examination of this or another educational program without explicit consent of my thesis supervisor.

d. I declare that (my part of) the research data described in the thesis are obtained empirically and processed with integrity and in a scientifically responsible manner.

Place and date: Nijmegen 10-01-2022

Signature: ....