

## **Gesture-word combination in politics: A case study of Boris Johnson and Jeremy Corbyn during televised debate**

### ***Abstract***

*A politician's success does not only depend on what is said but also on how it is said, presented and perceived. We therefore analysed a televised political debate between the leader of the Conservative party, Boris Johnson, and his opponent Jeremy Corbyn from the Labour Party. We will in particular look at hand gestures and the words used while doing these movements. In consequence, this paper analyzed the reciprocity of Johnson's and Corbyn's gestural and verbal presentations.*

*As we focus on hand gestures and co-occurred speech, we tried to verify the "body-specificity" hypothesis proposed by Casasanto et al. However, we did not observe a strong association between the valence (negative / positive) of speech and the usage of the dominant or non-dominant hand. We also observed that when the debate got more intense or more negative feedback by the audience was perceived, the debater tended to use more gestures than usual.*

### **1. Introduction**

During the long-lasting Brexit debate, political debates were essential for the public to be able to compare different political standpoints and ideas to make decisions on whom to vote for. One important part of such an informed decision are televised political debates such as the one analysed in this paper. Another important factor is that also the politicians have the possibility to reach out to many different voters, their potential supporters as stated in Alvarez-Benito et al (2010, p.1), meaning that they are publicly efficacious for both sides, the politics and the public. Alvarez-Benito pointed out that one consequence of that might be that those politicians who are verbally more competent than their opponent while giving a poorer performance during such a debate could lose based on how they present themselves and how that presentation is perceived by the audience – although they are the more competent politician.

To analyse such effects, we will analyse gestures and the accompanied verbal expression used while doing these movements. As beat gestures represent the largest proportion among all gestures, we will mainly focus on these, also because previous studies have shown such

gestures are performed more when a speaker is trying to explain complex or abstract ideas (Chidambaram, Chiang, Mutlu, 2012), and are linked to elicitation and control of applause (Bull, 1986) - both two aspects important for political speakers. This analysis will then discuss the role of this type of gestures during the speech, and how they are related to the verbal expressions.

In their paper “Gestures during Positive and Negative Speech” Casasanto and Jasmin (2010) propose that the hand used to express an idea or convey information might depend on the dominant side of the speaker. For example, if the speaker is left-handed, that person is more likely to express positive aspects such as “intelligence, attractiveness, and honesty” (Casasanto et al. 2010) with that hand and negative ones with the right. Furthermore, we would expect that if this hypothesis is true, the speaker will use one’s dominant hand to convey positive content. The paper will therefore concentrate a word-gesture comparison to analyse whether this proposal is also valid for Johnson-Corbyn debates. As both politicians are right handed, we assume that a direct comparison between the two characters is more feasible than choosing different dominant-handed persons. The right handedness of both politicians was determined by consulting interviews and speeches where they, for example, had to sign documents which were taken as indicators for their preferred hand.

Casasanto et al. introduce this interdependence of action and emotions by giving the example of approaching when something is seen positively and withdrawing when something is perceived as negative. On the one hand, they argue linguistically as some cultures associate the “good” and “positive” with the right. To illustrate this one can consult expressions such as expressions such as “that is right” opposed to a negative meaning of the left in expressions such as “to have two left feet” (see Casasanto et al 2010:1). Also other areas show this tendency which was then named the *body-specificity hypothesis* (see Casasanto et al).

This is the other aspect we want to analyse on the level of political debates by opposing the gestures and speech to analyse if they Boris Johnson and Jeremy Corbyn try to convey specific (negative or positive) ideas with their dominant or non-dominant hand or, in case that the results do not show any correlation for this, if the use of the dominant hand might just be due to the heavier use of the dominant hand. So the aim is to find out if the body-specificity hypothesis can also be observed in political debates where part of the gesture communication might be

trained but where it might still be influenced by spontaneous behaviour. To do that, we used a video of a TV debate held between Boris Johnson and Jeremy Corbyn held in December 2019.

## **2. Methodology**

### **2.1 Materials**

For the analysis in this paper we selected a TV debate of the leaders of the two major parties in the UK: Boris Johnson (Conservative Party) and Jeremy Corbyn (Labour Party). The political debate was held on the 11<sup>th</sup> November 2019 by ITV news and was recorded live and can be watched for free on YouTube. It lasts 1 hour and 29 minutes of which we chose the first 53min because the rest includes the audience's and other people's opinions on the debate but does not stage the debate with Boris Johnson and Jeremy Corbyn anymore. During the debate, the viewer can see Boris Johnson and Jeremy Corbyn standing behind their respective podium while there also is a live audience present. The moderator guides the debate and asks questions. In addition, people from the audience had been selected before the debate's beginning to ask questions, as well. The confrontation to an audience allows furthermore to give direct feedback, for example through clapping or laughing. This video was chosen due to its high representativeness for televised political debate settings. Among others, this includes that the politicians are standing, which might also increase their willingness to use gestures more readily and more frequently than when being seated. Apart from that, as the audience is present, they might be more aware of the importance of presenting themselves than when conducting a single interview with only one reporter. This might be especially true since the audience will also get the chance to pose them questions directly. Also, Johnson and Corbyn can get direct feedback from the audience that can give confirmation or rejection verbally and nonverbally, for example clapping or laughing, which might change or influence their way of gesturing by, among others, inflicting negative or positive feelings depending on the type of the audience's reaction.

Under this environment, Jeremy Corbyn and Boris Johnson will present their political positions and their opinions discussed. To quote Adams (2008) as quoted in Alvarez-Benito et al. (2010, p.2), "The winning candidate is able to effectively persuade the majority of the electorate that their opinions represent the best judgment. The winning candidate's positions are therefore

taken to represent the will of the majority.” However, as mentioned above, it is not only the content that decides upon winning or losing but also their rhetoric and behaviour on television.

For a more detailed analysis we divided the two debates into three different sections:

1. Introduction and welcoming
2. Main debate
3. Conclusion

The introduction part lasts 3 minutes and 53 seconds. Here, the moderator Julie Etchingham introduces the topic – questions on Brexit in the first part of the debate and general politics in the second half - and presents the participants who get the chance to present themselves and their politics in one minute. The order of whom to start answering the questions was determined by tossing a coin.

The main debate part consists of questions being asked by Mrs. Etchingham and a short answer of 1 minute per politician followed by a 5 minute debate between them. The structure per question could therefore be separated into two parts with one being closer to an interview and the second an actual debate structure. In this direct debate, the screen is often split into two, showing Johnson on the left and Corbyn on the right side. The moderator guides the debate. Her task especially is to ask for details or clarifications if the questions have not been properly answered, as well as to keep track of time.

The first five questions are the following. We here only repeat the main question itself and not the explanations given before or after that by the moderator. In the brackets behind each question we mark the time the question started, here also including the introduction and explanation to the question. As we only included the first 53 minutes, we will show the time in the format [minutes:seconds]. The questions have been collected from all over the country.

Q1: Can you reassure me that we will not be talking about his [Brexit] forever? [04:24]

Q2: Is the Union worth sacrificing for Brexit? [13:53]

Q3: How can this nation trust you to have the personal integrity and individual strength of character to look after our countries’ interests, rescue us from this mess and bring us back together? [20:35]

At 29 minutes and 18 seconds, Julie Etchingham announces a break and what is being discussed afterwards: in the next part, the audience will pose questions. Here again, we only show the question itself and do not indicate the introduction the person gives to oneself and the topic, except when necessary to clarify the question. The questions are the following:

Q4: How will you ensure that the health service can meet future demands and would they include any privatization? [33:47]

Q5: What can you say to reassure me [that you won't throw away money because neither of you have ever had to worry about money]? [40:42]

For the next questions, the debaters are asked to give very short answers, preferably with only yes or no or with just one word. The questions are asked by the moderator.

Q6: Is the monarchy fit for purpose? [46:32]

Q7: Is Prince Andrew fit for purpose? [46:51]

Q8: Do you agree that climate change is the biggest issue in our country today? [47:40]

Q9: Which current foreign leader do you most admire? [48:44]

As there was still some time left, Julie Etchingham decided to ask this one more question from the audience:

Q10: What present would you leave on the Christmas tree for each other this year? [49:43]

The last part, the conclusion, starting at 51 minutes and 9 seconds contains the concluding statements. Both Jeremy Corbyn [51:09] and Boris Johnson [51:58] have the opportunity to give their final half-a-minutes statements, followed by the moderator's closing.

## **2.2 The Annotation Procedure and Evaluation**

To describe the gestures and match them with the co-occurred speech, we implemented a coding scheme which included orthographical transcript and gesture features (i.e. gesture time course, gesture phase and handedness) for different speakers (table 1).

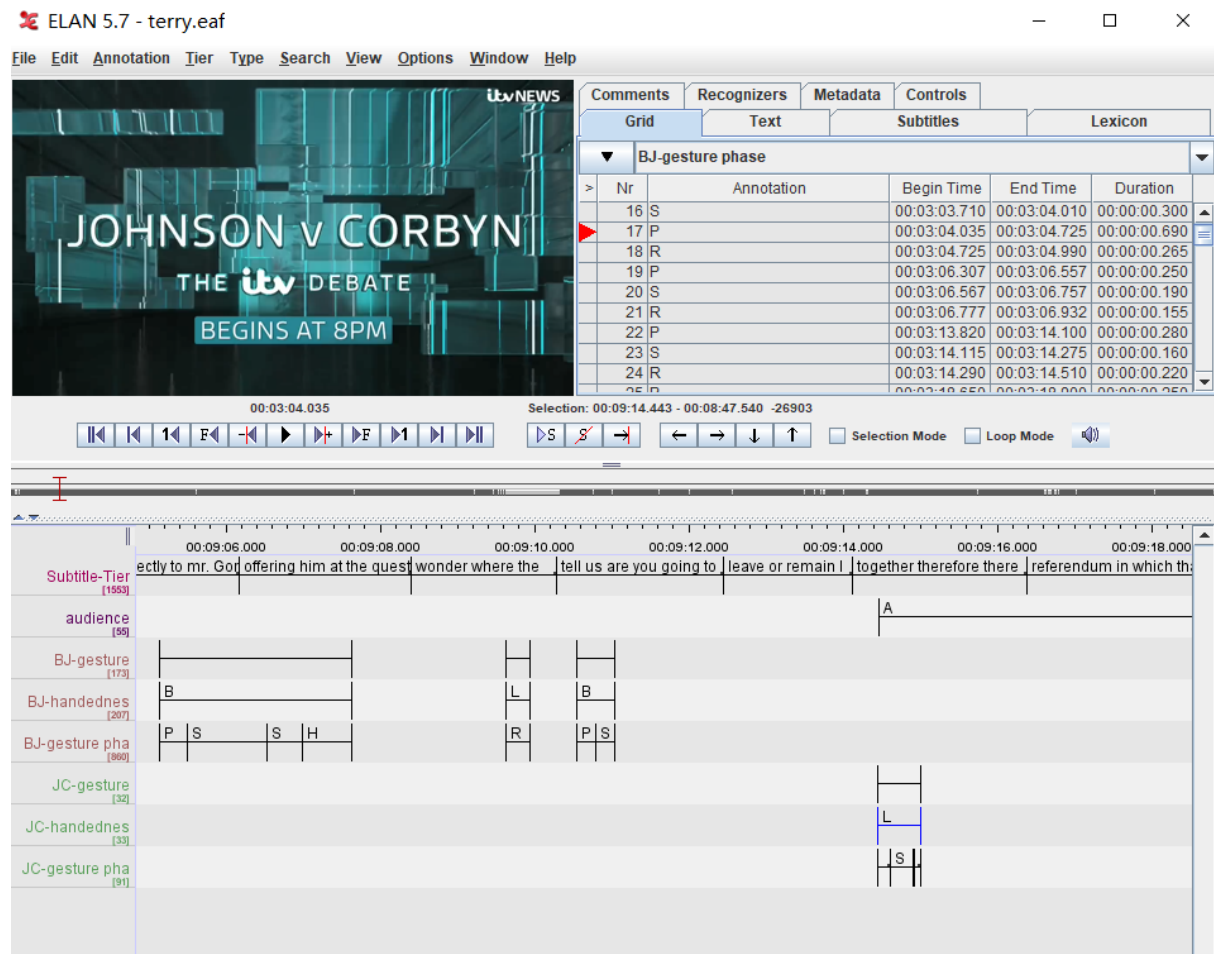
**Table 1:** Coding scheme for gesture-speech annotation

Subject	Attribute	Value description
-	subtitle	orthographic transcription of the speech
Audience	reaction	“L” for laugh; “A” for applause
Speaker A	gesture	The time courses in which continuous gestures appeared
	handedness	"B" for both hands; "R" for right hand; "L" for left hand
	gesture phase	"P" for preparation; "S" for stroke; "H" for hold; "R" for "retraction"
Speaker B	gesture	The time courses in which continuous gestures appeared
	handedness	"B" for both hands; "R" for right hand; "L" for left hand
	gesture phase	"P" for preparation; "S" for stroke; "H" for hold; "R" for "retraction"

For annotation, we employed the ELAN software, version 5.7 and 5.9 (Sloetjes et al., 2008). As the transcripts of the debate were available with the videos, we import them directly into ELAN for further annotation. We annotated the gestures which we judged as beat gestures. The annotation contained 8 tiers corresponding to the coding scheme (see *Figure 1*): (1) subtitle-tier, (2) audience, (3) gesture of Boris Johnson (BJ-gesture) and Jeremy Corbyn (JC-gesture) (4) handedness of the both politicians (BJ/ JC-handedness), and (5) gesture phases for them (BJ/ JC-gesture phase). The first 20 minutes of the video were coded by two annotators in order to conduct a coding agreement trial. The rest of the video was then splitted equally for further processing.

The inter-coder agreement was calculated automatically in ELAN by two means: computing modified Cohen’s kappa (Holle & Rein, 2014) and the ratio of overlap and extent (Hellwig, 2020). According to Holle et al, the Cohen’s kappa (Cohen, 1960) values we reported here included the no match category and were fitted by an iterative proportional fitting algorithm. In our experiment, the kappa values were from 0.12 to 0.79, depending on the category. For the tier “BJ-gesture phase” and “JC-gesture phase”, the kappa values (0.35 and 0.12, respectively) were obviously lower than others. However, as we mainly focus on gesture stroke

counts in further analysis, and the raw agreement of annotations for stroke in the tiers “BJ-gesture phase” and “JC-gesture phase” was 0.68, 0.62 respectively, we still consider an effective agreement was reached. The ratio of overlap and extent was the other index we calculated for intercoder agreement. It is the amount of overlap of two matching annotations divided by the total extent of those two annotations (Hellwig, 2020). The ratio values were between 0.71 and 0.84. Thus we still consider the two annotators have reached a substantial agreement.



**Figure 1. Screenshot of annotation with ELAN tool.**

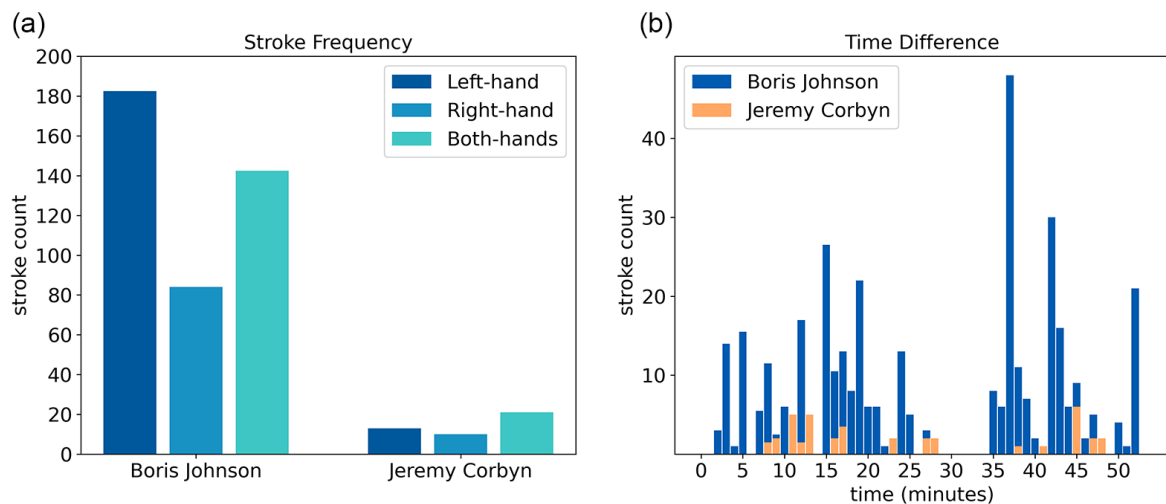
We also employed a Python package *pympi-ling* developed by Lubbers & Torreira (2013) for further data analysis. The package provides high-level abstraction functions of ELAN files.

To investigate the usage of hand beat gestures, we calculated the overall stroke counts and the counts across time. Results can be seen in Figure 2 and 3 that will be explained in further detail later on in this paper.

### 3. Results

Through independent coding by two people and the comparison of their coding schemes and results we hope to have made a more objective and reliable testing of our hypothesis. The *body-specificity hypothesis* described earlier in this paper can (only) be partly confirmed based on this video.

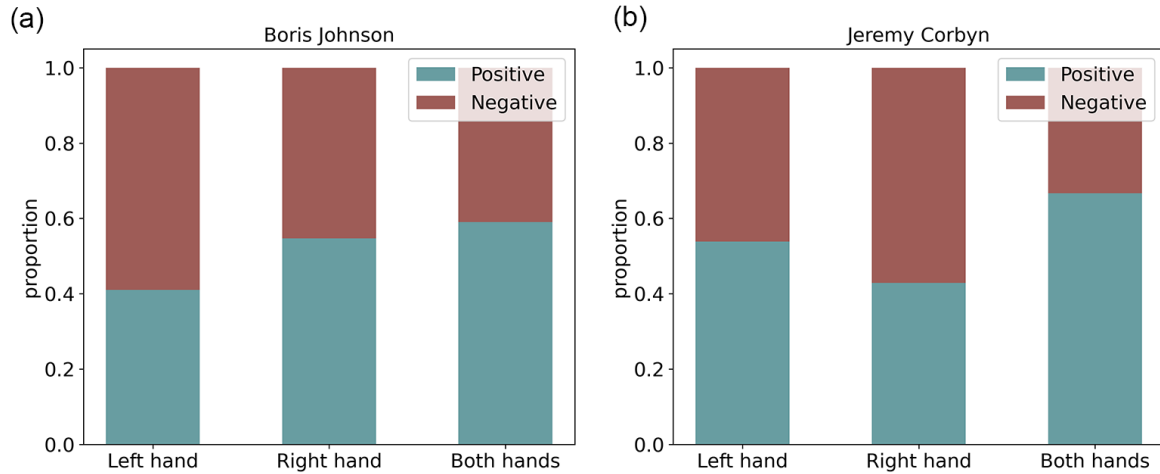
Figure 2(a) shows that both politicians prefer using their left hand instead of their right hand. Boris Johnson especially seems to have a much higher liking for the left hand: 183 strokes of the left-hand compared to 84 strokes with the right hand while the difference for Jeremy Corbyn is much lower with a difference of less than 10 strokes. This seems to argue against the hypothesis as politicians are right handed but use their left hands, so their non-dominant hands, much more frequently.



**Figure 2. Overview of stroke count.** This figure shows an overview of stroke count for both debaters. **(a)** overall stroke count. Boris Johnson used much more beat hand gestures than Jeremy Corbyn. Both debaters used right-hand most infrequently. **(b)** stroke count across time. The time difference could be due to them taking turns for speech. Note that the gap in during 30 to 35 minutes is the break time of the show. Some other small gaps could be the audiences raising questions or the moderator giving instructions of the debate.

However, when looking at the distribution of negative and positive ideas, we see the hypothesis confirmed for Boris Johnson's data. As Figure 3 shows, Boris Johnson uses his right hand to convey more positive meaning than with the left hand, whereas Jeremy Corbyn shows the opposite effect: he rather uses the left hand for positive ideas.





**Figure 3. Overview of positive/negative proportion in handedness.** This figure shows an overview of the positive and negative attribution for the hands used. **(a)** shows the handedness regarding positive and negative semantics of Boris Johnson and **(b)** of Jeremy Corbyn.

In consequence, these two figures indicate that there does exist a contrast between dominant and non-dominant hands but with the non-dominant hand being used more often than the dominant one. Furthermore, there does not seem to be a significantly higher association with positive or negative ideas for each hand. In fact, the amount of positive association is for both debaters highest when using both hands. The difference between right and left hand is at only 0.1. So there is no indication of the dominant side of the body, including the dominant hand, is used more often for positive ideas and the non-dominant hand for negative values. That means that Casasanto and Jasmin’s assumption of a “hidden link between action and emotion (2010: 1) based on the body-specificity hypothesis cannot be followed here.

Nevertheless, we need to consider part (b) of Figure 2 that shows that Boris Johnson used significantly more hand beat gestures than Jeremy Corbyn. The usage of beat gestures of both debaters have similar distribution but with a time difference. Previous studies have mentioned that people tend to use more gestures when explaining professional complex ideas and trying to be persuasive (Chidambaram, Chiang, Mutlu, 2012; Bickmore, Pfeifer, Yin, 2008; Maricchiolo, Gnisci, Bonaiuto, Ficca, 2009). Therefore, the high usage of hand gestures might indicate the debater’s need to state complex ideas when the debate becomes more intense.

To illustrate this, we take Q4 as an example as this is where we can see the highest peak in Figure 2(b) at 37 minutes. The question is posed by a hospital doctor who witnesses the “unsustainable pressure of the NHS” (the National Health Service) and brands that as unacceptable conditions where he thinks that “only” getting more money is not enough. He

therefore raises the question on how the two debaters will ensure that the health service can meet future demands and if they would involve any privatization. When Boris Johnson was speaking, he had to defend himself and his politics from accusations made by Jeremy Corbyn earlier in the debate. There, Corbyn declared that Johnson had secret meetings with the US government and discussed with them the outsourcing of the NHS to the US. However, the audience seems to support Jeremy Corbyn's idea of deprivatization of the NHS more than continuing the privatization. As a consequence, Johnson might feel the need to stress his intentions on monetarily funding the NHS and other means to strengthen it. This stressing seems to be of high importance which is why he accompanies it with a lot of gestures. Furthermore, we can here find lots of strokes directed to Jeremy Corbyn which shows that Johnson wants to point out the difference between what he is saying and what Corbyn said beforehand.

To sum this up, our results show that there is a difference of handedness in political debates but that this handedness does not necessarily show a preference when trying to convey positive or negative content. Another aspect is the amount of strokes used during the debate. We observed that the more intense the debate became or the more negative feedback by the audience was perceived, the higher the use of gestures was.

#### **4. Discussion**

As we could see in the results, dominant-hand gestures do not always represent more positive ideas. Depending on the speaker, the contrast can even be found. That could prove that even though many cultures, especially European cultures, are more used to using the right hand, this general cultural tendency to right handedness does not influence the gesturing in political debates. Besides, it supports the impression that the two debaters are either not aware of the positive / negative meaning of hand-sides according to the body-specificity hypothesis and the effect it might have on the audience according to Casasanto et al (2010). Spontaneous and unconscious behaviour is also an important factor about gesturing, as this might cause the speaker to do hand movements that might not always be intended to serve a specific meaning - or maybe even contradicts with what is said. This might be especially true for such televised debates: the two politicians do not know which questions might be asked and can therefore not prepare themselves for specific answers and train their answers, including how to present

and support those with gestures. It is therefore very probable that much of the gesture we can observe in the video is rather unplanned gesturing.

One aspect that could make the analysis difficult is the high discrepancy in the amount of gesturing: as Jeremy Corbyn uses much less gestures overall (44 strokes in total), the reliability of the correct positive / negative annotation could be questionable, especially in comparison to Johnson who provides much more data (410 strokes in total) for analysis and seems to fit the hypothesis. Another factor is the difficulty identifying positive and negative statements because the debaters often simply state facts where giving a label can be challenging as personal attitudes and mindsets influence the labelling. Also, the speakers often employed a strategy of stating rather negative facts first, and then adding how to change that to a better situation. Such strategy results in a fluent transition between positive and negative statements, making it more difficult to find the right turning point. Besides, we need to take into consideration their positions in the room. As Jeremy Corbyn is situated on Johnson's left side, many of the strokes might be directed to the left side when Johnson is arguing against his opponent who is standing on the left as also stated by Özyürek (2002).

Nevertheless it needs to be taken into account that compared to his opponent, Jeremy Corbyn appears to generally use much less hand beat gestures. However, this does not suggest his speech was mundane. In fact, we found that he used a great amount of head nodding synchronized with his speech prosody. The amount of beat gestures used by both debaters could be closer once we included the beat gestures of different body parts, in particular the head.

There are also two factors that prevented us from retrieving more complete data. First, the angle of video shooting was constantly changing, some of the gestures were not captured in the frame. Second, the frame mainly focuses on the upper body, thus preventing some lower gestures from being recorded.

Future studies could include more left-handed politicians to compare data against but also to analyse in how far cultural conventions influence the use of a specific hand. For example, shaking hands with the left hand is not possible in many cultures that are still often focused on right handedness. Such conventions might affect the use of the dominant left hand. Also, personality can be a decisive factor that has not been considered here, but that could give a further and deeper insight into annotating and analyzing this in future research.

As the body-specificity hypothesis suggests, the hand used could also indicate the speaker's feelings towards the said. Expanding this kind of analysis to include the audience could therefore be of great interest, too, as it might allow the audience to deduce more subtle information - such as the speaker's attitude towards the said - given that the audience knows which one the dominant hand is and their ability to make deductions based on that. The effects on poll results or similar could be taken into account when including the audience. Apart from that, it might be interesting to analyse if a viewer who shares the same handedness might unconsciously detect the action-emotion pattern stated to exist according to the body-specific hypothesis, and therefore share the same subtle and unconscious action-emotion pattern with the speaker.

## 5. Indication of contribution

A more fine-graded indication can be found in this table.

	Mengran Chen	Lena Burkel	Ting-Yu Kuo
<b>Data</b>			
annotation	x		x
analysis	x		x
graph			x
<b>Report</b>			
abstract	x	x	
introduction	x	x	
results		x	x
methods	x	x	x
discussion		x	

## 6. Bibliography

1. Iñigo Mora, I. M., & Alvarez Benito, G. (2010). Gestures and Words in Political Discourse: A Case Study of the Obama-McCain Encounter.

2. ELAN (Version 5.7) [Computer software]. (2019). Nijmegen: Max Planck Institute for Psycholinguistics, The Language Archive. Retrieved from <https://archive.mpi.nl/tla/elan>"
3. ELAN (Version 5.9) [Computer software]. (2020). Nijmegen: Max Planck Institute for Psycholinguistics, The Language Archive. Retrieved from <https://archive.mpi.nl/tla/elan>"
4. Holle, H., & Rein, R. (2014). EasyDIAG: A tool for easy determination of interrater agreement. *Behavior Research Methods*, August 2014.
5. Cohen, Jacob. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20(1), 37-46. doi: 10.1177/001316446002000104
6. Hellwig, Birgit. (2020). ELAN - Linguistic Annotator: version 5.9. Nijmegen: Max Planck Institute for Psycholinguistics, The Language Archive.
7. Chidambaram, V., Chiang, Y. H., & Mutlu, B. (2012, March). Designing persuasive robots: how robots might persuade people using vocal and nonverbal cues. In *Proceedings of the seventh annual ACM/IEEE international conference on Human-Robot Interaction* (pp. 293-300).
8. Bull, Peter. (1986). The Use of Hand Gesture in Political Speeches: Some Case Studies. *Journal of Language and Social Psychology - J LANG SOC PSYCHOL*. 5. 103-118. 10.1177/0261927X8652002.
9. Lubbers, M., & Torreira, F. (2013). 2018. pympi-ling: a Python module for processing ELANs EAF and Praats TextGrid annotation files.
10. Casasanto, Daniel & Jasmin, Kyle. (2010). Good and Bad in the Hands of Politicians: Spontaneous Gestures during Positive and Negative Speech. *PloS one*. 5. e11805. 10.1371/journal.pone.0011805.
11. Bickmore, T., Pfeifer, L., & Yin, L. (2008). The role of gesture in document explanation by embodied conversational agents. *International Journal of Semantic Computing*, 2(01), 47-70.
12. Maricchiolo, F., Gnisci, A., Bonaiuto, M., & Ficca, G. (2009). Effects of different types of hand gestures in persuasive speech on receivers' evaluations. *Language and cognitive processes*, 24(2), 239-266.
13. Özyürek A (2002) Do speakers design their co-speech gestures for their addressees? The effects of addressee location on representational gestures.
14. *Journal of Memory and Language* 46: 688–704.