Non-Verbal Gender Differences in Offensive Political Debates

J. Beeks, K. van Es, M. van Grinsven, M. de la Haije, S. Langerwerf, E. Radix

Abstract

Gender differences have been an interesting angle for researchers. Adult males and females have been shown to differ significantly with regard to their conversational styles. Their non-verbal differences, however, have not been studied as much. The current study addresses this problem by an analysis on non-verbal offensive debating styles between males and females. Their non-verbal characteristics were studied using the micro-analytic facial expression coding system CERT, and by means of a questionnaire. The results indicated that women were considered to be more aggressive/assertive based on their offensive debating style compared to men.

Keywords: political debates; gender differences; non-verbal; CERT.

Introduction

Since the 1960s, presidential candidates in the United States have been burdened with the requirement to, next to their reported radio debates, also make their appearance on national television. Consider, for example, the widely reported debate between Richard Nixon and John Kennedy. Analysts found that radio listeners judged the debate to be a draw, whereas television viewers reported Kennedy to be the winner (Knapp, Hall & Horgan, 2012). These television debates have been found to increase concern for the influence of nonverbal signals (Kraus, 1996; Vancil & Pendell, 1987).

Adult males and females have been shown to differ significantly with regard to their conversational styles. Males employ a more lecturing, argumentative and debating style, while females appear to be more concerned with socio-emotional aspects of their listeners (Bernard, 1972). In addition to differing conversational styles, recent research has indicated that certain behavioural expectations are gender dependent. Consider, for example, Gidengil and Everitt's (2003) study on gender and media coverage of political debates. It was found that when women practised an offensive debating-style, media portrayed them to be more aggressive in comparison to males adapting a similar style, hereby drawing upon certain 'gender biases'. Since the general notion is that women are less aggressive that men (Brody, 1997), deviation from this bias could result in findings similar to the Gidengil and Everitt (2003) research. Burns and Katkin (1993) hypothesize that the reason for us to stereotype women as less expressive of anger than men is not only that we connect anger with aggression, but also that women may express anger less via facial, vocal and physiological changes that men. In addition, it has been claimed that emotionality and friendliness are stereotypically seen as female characteristics, expressing warmth. Assertiveness, rationality, aggressiveness and confidence, on the other hand, are more masculine characteristics, and are seen as more instrumental (Huddy & Terkildsen, 1993).

Although previous research has indicated that televised communication is unique due to both its verbal and nonverbal aspects, prior researchers have mainly focused on what is said during political debates whilst overlooking nonverbal behaviors (Pfau & Kang, 1991). Seiter and Weger (2005), in addition, stress the importance of greater generalizability in this line of research, especially with regard to the possibility of sex differences in evaluations of political candidates. While they concluded on nonverbal behavior to generally have a notable impact on audience perceptions of political candidates, the difference between men and female politicians has not yet been investigated. Based on such findings, and, to a greater degree, on missing findings with regard to nonverbal gender differences, the current research has been conducted. Since men are generally less engaged with facilitating communication than women, and more prone to adapting a verbal offensive debating-style, it would be interesting to test whether these gender differences also occur nonverbally. We therefore propose the following research question:

RQ: How are gender differences displayed nonverbally in offensive political debates?

In addition, based on gender differences with regard to verbal characteristics during political debates, nonverbal characteristics, and gender biases, the following hypotheses are proposed:

H1: Men show more facial expressions associated with aggressiveness, than women.
H2: Men are judged higher on masculine characteristics: assertiveness, rationality, aggressiveness and confidence, than women.
H3: Women are judged higher on female characteristics: friendliness, emotionality, than men.
H4: Men show more nonverbal aggressive behavior during a political debate than women.
H5: Men show more nonverbal assertive behavior during a political debate than women.

In order to test our research question and hypotheses, a number of tests were conducted. First, nonverbal aggressive behavior between men and women in political debates was analysed using the micro-analytic facial expression coding system CERT. The Computer Expression Recognition Toolbox (CERT) measures facial expressions in real-time, and consequently codes them with respect to the expression of basic emotions, as well as over 20 facial actions

(Littlewort et al., 2011). These facial actions are derived from the Facial Action Coding System (FACS) (Ekman & Friesen, 1978), which measures all visually discernible facial movements. As stated by Brody (1997), studies identifying findings with regard to gender biases have not yet used recent micro-analytic facial expression coding systems, such as Ekman and Friesen's Facial Action Coding System (FACS), to fully conclude these results.

In addition to the CERT analysis, a second analysis with regard to the nonverbal aggressive behavior between men and women in political debates was run. Since CERT remains a relatively new program prone to minor flaws and shortcomings, a questionnaire was set up to analyse participants' responses to these specific situations.

Stimuli Collection

Selection Criteria and Procedure

The creation of the database with audio-visual clips of male and female politicians was organized as followed. All clips were collected from YouTube and the website www.tweedekamerdebatgemist.nl. To account for content specific differences, it was made sure that all clips were selected from recent political debates regarding economic issues and surcharges. A total of five different debates was analysed. For answering our research question, it was to be ascertained that only politicians displaying offensive behavior were added to the database. To select such clips, all debates were analysed with regard to the use of verbal intensifiers in a negative context, intonation and overall content. Since intensifiers are generally used to enhance and give additional emotional context to the word it modifies, it was expected that an increasing amount of intensifiers in a negative context (e.g., 'very far from', 'really do not agree with') would account for more offensive speech. In addition, intonation was analysed, hereby selecting clips containing the politician uttering highly emphasized words. It was expected that such words accounted for higher offensive speech, considering the transference of an explicit message to the listener. Thirdly, the overall content of speech was analysed. All clips were selected based on politicians uttering their or their represented party's opinion, mostly conflicting with those of other individuals. Given the highly subjective nature of each criterion, fragments were selected and analysed by different researchers to avoid individual differences.

Since all clips were to be analysed using CERT, another selection criterion was that each politician was filmed in front, hereby showing both eyes during the entire fragment. In addition, clips containing notable background motion were left out of consideration, since CERT generally does not support such clips. Also, since politicians are usually filmed from the waist up, only those clips were included in the database. The entire database consisted of 20 clips per condition (male-female), hereby including a total of 40 clips. Figure 1 shows a representative still of a male politician used in our analysis.

Figure 1: Representative still of male politician.

Video Editing

The selected political debates were approximately one to one and a half hour long, and needed to be cut in fragments. Microsoft Movie Maker was used to cut the selected fragments, and convert them to a .wmv format for further analysis. Each selected clip ultimately lasted five to twenty seconds. In anticipation of the second study involving a questionnaire, in addition to its non-function with regard to CERT, sound was removed from each clip using Windows Movie Maker. This was to ascertain that participants only considered politicians' non-verbal behavior instead of their overall performance.

Coding

In total, 40 clips had to be analyzed by CERT: 20 fragments of male politicians, and 20 fragments of female politicians. Since the current research addresses aggressiveness/assertiveness, Action Units that represented assertiveness and aggression characteristics (Inner Brow Raise, Brow Lowerer, Lid Tightener) were selected for further analysis (Ekman & Friesen, 1978). Unfortunately, CERT did not accept all clips. Two male clips, and five female clips were considered inadequate for further analysis, hereby making the output a total of eighteen clips of male politicians and fifteen clips of female politicians. The output of CERT was exported to SPSS.

Questionnaire

Participants

In total, 46 participants filled out the online questionnaire. Four participants failed to answer more than two questions, these where excluded from further analysis. The participants ranged in age from 19 to 42 (M = 23.05), and 28% was male. All education levels were represented (primary school, MBO, HBO and WO), the majority (72.2%) of the participants, had selected HBO/WO as their education level. The majority of the participants stated to have a 'left wing' political preference (38.1%), followed by 'centred' (31.0%) and 'right wing' (19%). Of the 42 participants, 11.9% claimed to have no particular political preference.

Materials and Procedure

For demographic purposes, participants were asked to report their age, gender, education level, and political preference (resp. left wing, centred, right wing, no particular preference). For the questionnaire, ten random clips from the previous study (five male, five female) were selected. Each fragment was followed by six questions. First personal characteristics of the politician had to be rated on a 7-point Likert scale, in which 1 stands for 'not at all', and 7 for 'very much'. These questions were derived from the Huddy and Terkildsen's (1993) scale regarding assertiveness, friendliness, rationality, emotionality, aggressiveness and confidence. The following four questions were added to measure participants' ratings of the politician's behavior as assertive and aggressive. Questions were based on some of the typical behavior intentions as described by Bloem (2012), which fit assertiveness and aggressiveness criteria (e.g., 'I find this person explosive, unpredictable and hostile'). Each question was again rated on a 7-point Likert scale, in which 1 stands for 'not at all', and 7 for 'very much'. The final question considered whether the participant recognized the politician, and could be answered by checking a 'yes' or 'no' box. Knowledge on the shown politicians could namely have accounted for effects on final outcomes. In total, the questionnaire consisted of 115 questions. The entire questionnaire can be found under http://www.thesistools.com/web/?id=393922.

The questionnaire was created via www.thesistools.com. Via a link in an email Facebook post, we invited people to fill out the questionnaire. The survey was online from the 21st of February till the sixth of March. In the introduction it was made clear that the participants had to pay attention to the nonverbal behavior of the politicians. Furthermore, a time indication (approximately ten minutes) for the questionnaire was given. Also, the anonymity of the respondents was guaranteed by explaining that all data was treated in a confidential way.

Results

The data, which derived from CERT and the answers to the questionnaire, was analysed by the use of SPSS to measure and detect significant differences in the aggressive/assertive behavior and characteristics of female and male politicians. First, the tests and findings of the SPSS analysis of the questionnaire data will be outlined. Secondly, the findings of the SPSS analysis of the CERT data will be clarified, to determine the role of facial movements when comparing the aggressiveness and/or assertiveness female and male politicians express when debating.

First, a paired sample t-test was conducted to measure whether male and female politicians were evaluated differently while expressing aggressive/assertive behavior, and to determine whether they significantly differed on the six personality characteristics (assertiveness, emotionality, friendliness, rationality, aggressiveness, confidence). It was found that the mean scores on 'aggressive behavior' differed significantly between female politicians (M = 3.10, SD = 0.99) and male politicians (M = 2.74, SD = 0.77) (N = 40, r = 0.58, p < .001), in which females were rated to be more aggressive than males. Ratings on 'assertive behavior', however, did not significantly differ. With regard to the personality characteristics, significant results were found for several items. The mean score on 'emotionality' significantly differed for female politicians (M = 4.23, SD = 0.76) compared to male politicians (M = 3.90, SD = 0.86) (N = 42, r = 0.57, p < .001), in which female politicians were judged to be more emotional. The findings also showed that the mean score on 'friendliness' was significantly smaller for female politicians (M = 3.98, SD = 0.78) compared to male politicians (M = 4.42, SD = 0.59) (N = 41, r = 0.59, p < .001). The last characteristic item on which female politicians (M = 3.35, SD = 0.99) significantly differed from male politicians (M = 2.95, SD = 0.87) was 'aggressiveness' (N = 42, r = 0.60, p < .001). The results indicated that females were perceived to be more aggressive than males. Comparison of personality characteristics 'assertiveness', 'rationality', and 'confidence' between male and female politicians did not provide for significant results.

To test whether there would be a difference in the recognition of the different politicians by the participants, a frequency test was set up. The results indicated that the male politician in clip 9 was recognized by most (47.6%) of the participants. The politician in clip 2 was recognized by 32.0% of the participants, 27.0% recognized the politician in clip 10, and the remaining seven politicians were recognized by less than 10.0% of the participants. To measure whether recognition of the male politician in clip nine had an influence on the overall results, an independent sample t-test was conducted. Findings indicated that there was no significant difference on the mean scores of the characteristic and behavior items for participants who did, or did not, recognized the male politician.

In addition, a one-way Anova test was conducted to measure whether the political preference of the participants (left, centred, right, none) had an effect on the scores of the personal characteristic and behavioral items for both the female and male politicians. Results indicated that political preference was no significant factor in judging the politicians.

With regard to the CERT analysis, a paired sample t-test was set up to determine whether facial expressions of female and male politicians would differ on aggression and/or assertiveness characteristics (Action Units 'Inner Brow Raise', Brow Lowerer', and 'Lid Tightener'). It was found that only the Inner Brow Raise of the selected Action Units provided for a significant result regarding to differences in male (M = -1.30, SD = 0.34) and female (M = -0.93, SD = 0.55) facial expressions (t = -2.18, p < .05), in which a closer number to zero implied that the Action Unit was more likely to be present.

Discussion

The purpose of the current study was to determine whether males and females differed with regard to the nonverbal

aspects of their offensive debating style. With hypothesis 1, we focused on facial expressions associated with this typical political aspect. One Action Unit proved to exemplify differences between both parties. It was found that males displayed more Inner Brow Raise, typically associated with aggressiveness, hereby supporting our initial hypothesis. Interestingly, however, our remaining Action Units (i.e., Brow Lowerer, Lid Tightener) displayed no particular differences. These results could be explained by technical limitations posed by CERT. Since all video fragments were carefully selected for optimal output results, CERT still failed to produce output by 'focussing' its image on background items. In addition, blurred faces in the background were run in the analysis, hereby creating a distorted image. Several fragments, therefore, had to be left out for further analysis. Future research could help tackle this problem by producing a function for focusing on a specific aspect in the to-analyse frames.

In addition, hypothesis 2, 3, 4 and 5 were set up with regard to typical masculine and feminine characteristics, aggressive/assertive behavior, and their subsequent ratings by our participants. It was found that, contrary to our initial hypotheses, females were judged higher on aggressiveness (a typical male characteristic) and lower on friendliness (a typical female characteristic), compared to males. In addition, females were found to be more emotional. Remaining characteristics (i.e., assertiveness, rationality, confidence) were not found to be significantly different. Based on such results it could be claimed that hypothesis 2 is rejected, while hypothesis 3 appears partly rejected. In addition, it was found that females were judged to display more aggressive behavior compared to males, hereby disproving hypothesis 4. These results pose an interesting question: why are females overall judged to be more offensive than males? One reason could be found in certain gender-biases. Since the general notion is that women are less aggressive that men (Brody, 1997), women displaying offensive behavior could have resulted in participants being forced to deviate from their stereotyped opinion of women being less expressive of anger. With regard to hypothesis 5, stating men to show more assertive behavior than women, no significant results were obtained.

Conclusion

In order to test the conducted hypotheses and eventually the research question, forty clips from male and female politicians were selected that met several preconceived criteria. The clips were analysed by CERT software and twelve of the clips were selected to implement in the questionnaire, which was part of the additional perception test. The questionnaire consisted of questions based on certain typical behavioural intentions, including assertiveness and aggressiveness. Results of the CERT analysis demonstrated that there were no significant differences in male politician nonverbal behaviour and female politician behaviour regarding the Action Units that represented aggressiveness, except the Action Units Inner Brow Raise (t = -2.18, p < .05). Results of the questionnaire demonstrated that females were perceived to be more aggressive than males. Comparison of personality characteristics 'assertiveness', 'rationality', and 'confidence' between male and female politicians did not provide for significant results.

In sum, the current results could be connected to certain gender biases people have on women being less aggressive than men. In addition, it was found that CERT posed for problems with regard to image quality. While clips were carefully selected to meet its criteria, background motion still significantly impacted output results. Future research on image focusing could help tackle this specific problem.

References

Bernard, J. (1972). *The sex game*. Englewood Cliffs, N.J: Prentice-Hall.

Bloem, M & Buys, G. (2006). *En nu ik: Assertiviteit in een notendop*. Zaltbommel, Nederland: Thema.

Brody, L. R. (1997). Gender and emotion: beyond stereotypes. *Journal of Social Issues, 53*(2), 369-394.

Burns, J. & Katkin, E. (1993). Psychological, situational, and gender predictors of cardiovascular reactivity to stress: a multivariate approach. *Journal of Behavioral Medicine, 16*, 445-465.

Ekman, P., & Friesen, W.V. (1978). *Facial Action Coding System (FACS): A technique for the measurement of facial action.* Palo Alto, CA: Consulting Psychologists Press.

Gidengil, E., & Everitt, J. (2003). Conventional coverage/unconventional politicians: gender and media coverage of Canadian leaders' debates, 1993, 1997, 2000. *Canadian Journal of Political Science, 36*(3), 559-577.

Huddy, L. & Terkildsen, N. (1993). The consequences of gender stereotypes for women candidates at different levels and types of office. *Political Research Quarterly, 46*(3), 503-525.

Littlewort, G., Whitehill, J., Wu, T., Fasel, I., Frank, M., Movellan, J., & Bartlett, M. (2011). The computer expression recognition toolbox (CERT). In *Automatic Face & Gesture Recognition and Workshops (FG 2011), 2011 IEEE International Conference on* (pp. 298-305).

Kraus, S. (1996). Winners of the first 1960 televised Presidential debate between Kennedy and Nixon. *Journal of Communication, 46*(4), 78-96.

Pfau, M., & Kang, J. G. (1991). The impact of relational messages on candidate influence in televised political debates. *Communication Studies, 42*(2), 114-128.

Seiter, J. S., & Weger, H. (2005). Audience perceptions of candidates' appropriateness as a function of nonverbal behaviors displayed during televised political debates. *The Journal of Social Psychology, 145*(2), 225-235.

Vancil, D. L., & Pendell, S. D. (1987). The myth of viewer-listener disagreement in the first Kennedy-Nixon debate. *Central States Speech Journal, 38*(1), 16-27.