

Master thesis

The effect of a leader's voice and face on leadership perceptions, examining the impact of facial dominance and voice pitch.

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Abstract

*In order to investigate the influence of voice pitch and facial dominance on voting behaviour and leadership perceptions, an experiment including 180 Dutch adults was conducted containing a 2*3 factorial design. The participants were exposed to a normal and manipulated picture of Jan-peter Balkenende, the former Dutch prime-minister. Respondents were also exposed to a manipulated version of his voice in which the voice pitch had been lowered by 20 herz. The respondents seemed unaware of the picture and voice pitch manipulations as the respondents exposed to the manipulations noted to be just as familiar with the person displayed on the picture as respondents in the control group. However, the manipulations did not have the effect that was expected based on previous studies, the experiment largely showed the subtle nature of these effects on leadership perceptions and voting behaviour. The findings in this study indicate the limited influence of voice pitch and facial dominance on voting behaviour and perceptions of a well known leader's dominance, honesty and power.*

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The effect of a leader's voice and face on leadership perceptions, examining the impact of facial dominance and voice pitch.

Introduction

Around the world, perceptions of leaders have an impact on political outcomes. The exact impact of political leaders however has been subject to an intense debate among political scientists (Karvonen, 2010: 2-3). On the one hand, much of the existing research suggests that leadership effects are rather limited, especially if one wants to explain electoral behaviour (Bartels, 2002 ; Karvonen, 2010 ; Bartle & Crewe 2002). Others have argued the opposite and have shown the increasing electoral relevance of leaders across time (Swanson & Mancini, 1996 ; Wattenberg, 1991 ; Clarke et al., 2004).

The debate however has been centred on the question whether one can speak of an ongoing process of personalisation in western democracies. There is no consensus in the literature regarding this question but most studies agree that perceptions of leaders are always of some influence regarding political outcomes. Even the most sceptical studies usually agree that leaders can be decisive in elections that are decided by very small margins (Bartels, 2002: 68). Therefore, this study investigated a selection of relevant leadership perceptions which are expected to be important in order to understand the public image of a political leader. These leadership perceptions involve the leader's honesty, dominance and power.

Regarding these three mentioned leadership perceptions, the extent to which a leader is perceived as honest can be considered important to study because it is an important predictor of public trust in the leader and the political system in general. Rose-Ackerman argues that honesty is an important value for state officials because it has a close connection to trust (Rose-Ackerman, 2001: 1). Furthermore, one of the core components of political cynicism is a disbelief in the honest and honourable intentions of politicians. In many

occasions political cynicism is therefore also measured by people's level of agreement with statements concerning the honest or dishonest intentions of politicians (Agger, Goldstein, Pearl, 1961: 479 ; Stroud et al., 2011: 276). Accordingly, one may conclude that studies of political cynicism measure perceptions of honesty regarding politician's because the researchers believe that among other indicators of political cynicism, perceptions of honesty are important to study.

However in order to understand how perceptions of honesty regarding a political leader are shaped, one must look for possible explanatory factors. Hence the main goal of this study regarding perceptions of honesty is to examine whether the facial features of a political leader can influence the extent to which a leader is perceived as honest. It may seem an odd hypothesis to suggest that a leader could be perceived more or less honest due to facial features but according to the findings of studies on unfamiliar faces, facial cues can have this kind of influence (Zebrowitz & Montepare, 1992: 1143 ; Cunningham et al, 1990: 61).

Furthermore, research regarding faces of known politician's has provided evidence that the extent to which a leader is perceived as dominant and powerful can also be influenced by the status of certain facial characteristics the leader possesses. The studies that have investigated the effect of a politician's facial features on the way the politician is perceived however are limited by the fact that they were conducted in the United States (Surawski & Ossof, 2006: 24-25; Keating et al, 1999: 594).

The results of these studies can therefore only be interpreted in a limited sense because it is expected from the literature that leadership evaluations matter more in presidential systems compared to parliamentary systems (Aarts et al., 2011: 104 ; Karvonen, 2010: 6). Therefore it could easily be the case that perceptions of political leaders are shaped in a different way by a public in a multi-party parliamentary system compared to a public in a presidential system. One can imagine for example that in the Dutch case in which numerous

studies have shown the greater electoral relevance of parties compared to candidates, a political candidate may be associated more heavily with the political party he or she is leading (Holsteyn & Andeweg, 2008: 116 ; Holsteyn & Andeweg, 2012: 183). Therefore, one may find that the public perception of a candidate's honesty, power or dominance is shaped more heavily by the current and past performances of their political party when comparing the Dutch public to the American public. Hence, this study was conducted in the Netherlands because it is important to examine the influence of a leader's facial features in a different political context.

Besides, previous studies have mostly examined the impact of a leader's face and voice separately, except for one study who examined this for relatively unknown politician's (Surawski & Ossof, 2006). Accordingly, the choice was made to create an experiment in which the impact of a leader's face and voice was measured at the same time. Through the experimental design employed in this study, it is therefore examined whether a leader's voice or face has more influence on the public image of a leader. It must also be noted that regarding a leader's voice or face, multiple factors can influence perceptions of honesty, power or dominance. Considering that the aim of this study is to examine the effect of the voice and face for a well known political leader, limiting choices had to be made in order to make sure that the respondents were unaware of the vocal and facial manipulations which involved a known Dutch politician. Therefore it was decided to measure the effect of the politician's voice pitch and facial dominance, which are both factors that according to previous studies have the potential to influence the perception of a leader's power, dominance and honesty. Besides, the effect of a leader's voice pitch on voting behaviour is also examined in this study because a previous study has suggested a possible correlation between the height of a leader's voice pitch and electoral support for the leader (Tigue et al, 2011: 212).

Literature review

In the debate centred around the personalisation of politics, there has been a broad consensus regarding the following findings: evaluations of political leaders have less influence on voting behaviour in parliamentary elections when compared to presidential elections, the presence of a two-party system appears to make the relative influence of leaders more important when compared to a multiple party system (Aarts et al., 2011: 104 ; Karvonen, 2010: 6). However, regardless of the size of the impact leaders can have on electoral outcomes, perceptions of leaders will always shape public expectations. Knowledge of a leader's personal characteristics is useful for any voter in order to estimate the leader's actions in case the leader has to deal with unforeseen circumstances (Aarts et al., 2011: 3).

Moreover, characteristics of leaders can serve as tools to estimate the leader's future actions regarding vague policy preferences of their political party (Aarts et al., 2011: 3). For example, knowing that the leader has an aggressive character or knowing that the leader hates to compromise is valuable information for a voter who may be scared that the leader will give up his policy preferences easily in order to become part of a coalition government. The same goes for expectations of the leader which are relevant to estimate his or her support for participation in unforeseen wars or his or her actions during unforeseen catastrophes.

Besides, research has shown that factual knowledge of politics is related to the effect of leaders on electoral behaviour. Voters that typically paid less attention to politics used leader evaluations more often as an information shortcut to determine their vote (Aarts et al., 2011: 160 ; Sniderman et al., 1991). On the other hand, other studies contradict this finding, for example it was found that simply possessing political facts is not always related to an ability to make meaningful connections in political contexts and besides it was also found that leadership evaluations mattered more for voters with strong party attachments, who often possess a higher level of political sophistication than the average non-partisan voter (Bower-

Bir and D'Amico, 2012: 28 ; Aarts et al., 2011: 159). Besides levels of political sophistication, numerous studies have shown evidence in favour of the idea that voters think about leaders to estimate which political outcomes and policies they can expect once a leader is in office (Glas, 1985 ; Sniderman et al., 1991).

For leaders around the world and their citizens it is therefore valuable information to know which personal characteristics of the leader have an influence on public expectations and voting behaviour and how these characteristics exert their influence. An influential study on this matter showed that people's judgements are mostly influenced by their view of the competence, reliability and integrity of the leader (Miller et al, 1986: 530). Another more recent cross-national study which was carried out in 17 European countries argued that three general dimensions of a leader's personal influence can be distinguished: "home and family", "professional" and "personal preferences" (Hermans & Vergeer, 2012: 72). The first category or dimension refers to information about the leader which has to do with the leader's personal life, the second one has to do with information about the leader concerning his or her political career and optionally a career outside politics before or during the leader's political career. The last mentioned category refers to information about a leader's personal preferences such as the leader's preference for a certain artist or football club.

The study by Hermans and Vergeer focused on personalisation strategies used by candidates on social networking sites. The study showed that political candidates shared information which can be placed in the "professional" category far more often than information which can be placed in one of the other two categories. Therefore they concluded that sharing information related to the professional category was the most employed personalisation strategy by candidates from all countries in order to gain public support in the election of the European Parliament. Assuming that these candidates from all these countries were not all together wrong and that the "professional" category is indeed the most important

personal category to gain public support, one could consider it even more important that previous studies have shown that perceptions of qualification, power and even competence can be influenced by visual appearance and physical characteristics such as facial and vocal attractiveness. This suggests that regardless of any knowledge about the professional past and current professional activities of the leader, important leadership perceptions are also shaped by the visual image and the voice of the leader.

For example, a study showed that voice pitch manipulations of ex-presidents of the United States caused significant effects on the perceptions of the ex-presidents regarding their dominance, leadership, trustworthiness, intelligence, honesty and their ability to handle the current economic situation. Respondents judged the president's voices with a lowered voice pitch on average more favourably regarding all these attributions and were more willing to vote for the same president in a hypothetical national election and during a wartime scenario when they listened to the lowered voice pitch (Tigue et al, 2011: 212). Others have furthermore shown that a lowered voice pitch predicts higher perceptions of dominance and power regarding male and female voices and higher perceptions of attractiveness in the case of male voices (Jones et al, 2010: 57).

Regarding the impact of the visual image, a Dutch study showed that the very controversial Dutch politician Geert Wilders was evaluated differently due to a different picture. The pictures were not manipulated and the respondents were not told to focus on them in order to make up their mind. The pictures were part of a written news article. In one of the pictures Wilders is sticking a pencil in his nose, which obviously creates a more negative visual effect. In this study, Wilders was more positively evaluated on average for seven out of nine personality traits when respondents viewed the favourable photograph of him compared to the unfavourable one (Pellikaan & van Holsteyn, 2012: 10). Furthermore, when the visual images of candidates are purposely manipulated, it seems that they can also

be decisive in determining the outcome of an election. This was done in an experimental setting, in which respondents were aware of the different policy positions of fictional candidates. In two of three fictional elections, enhancing the image of one candidate while diminishing the image of the other candidate resulted in a reversed outcome (Rosenberg et al, 1991: 360). Besides, Barrett and Barrington in their study showed that for men negative images are more likely to result in a more negative evaluation of a candidate, while positive images are more likely to have a positive impact on women (2005: 106). To summarize the main finding of these studies one can conclude that all studies on visual images of politicians point in the direction that a mere photo can change someone's judgement.

However, all the mentioned studies related to character judgements only studied the effect of either the visual or vocal channel separately, which makes it very hard to state any expectations from the literature regarding the interaction and relative importance of a leader's visual and vocal features. So far, only one published study investigated the combined effects of the voice and face on the perception of a politician. This particular study by Surawski and Ossoff carried out in 2006 examined the relative importance of a politician's face and voice through measuring the attractiveness ratings of relatively unknown politicians who were active in the state legislature of a large Midwestern state of the United States. In their study, a pre-test determined which faces and voices were perceived as more attractive or less attractive (2006: 19). The result was that respondents were more likely to vote for candidates with attractive faces and they judged attractive faces to be more qualified and competent than less attractive faces. During this experiment, respondents were exposed to the policies of the hypothetical candidates. The main finding of the study was that the impact of facial attractiveness was far greater than the impact of vocal attractiveness in shaping voting behaviour and character judgements (Surawski & Ossoff, 2006: 24-25).

Whether one can expect to find the same results for the faces of well known leaders is

a different and important matter however, as a quote from the earlier mentioned article by Keating and others well illustrates: *"No one has yet determined how feature cues moderate character judgements made in response to faces that come packaged with reputations"* (Keating et al, 1999: 595). The study by Keating and others investigated how manipulated facial maturity of presidents of the United States influenced character judgements. The size of the eyes and lips were manipulated in order to make the face look more mature and dominant versus more neotenous. While respondents were unaware of the picture manipulations, the study showed that character judgements were effected but not in a consistent way for all three president's involved. (Keating et al, 1999: 604-605).

Therefore, an important finding was that expected effects based on studies of unknown people were not explaining the results of their study. The results they found were different per president which signals the important difference between studying a known leader and unknown people. Because no published study yet has investigated the combined effect and relative importance of vocal and facial characteristics in the case of a well known leader, this study will try to fill this gap. This will be done by answering the following research question: *What is the influence of voice pitch and facial dominance on the perception of a well known political leader?*

Theory, Concepts, and Hypotheses

The extent to which a person is perceived as dominant based on facial features is in most occasions contradicting the extent to which a person is perceived as warm. For example, large eyes and lips are expected to be related to higher perceptions of warmth and at the same time lower perceptions of dominance. By increasing a person's facial dominance, one would therefore expect the person to be perceived more dominant and at the same time less warm. The extent to which a person is perceived as warm in this sense is related to perceptions of

honesty, attractiveness and compassion (Keating et al, 1999: 594). This is expected due to studies that showed facial babyishness including large eyes and lips is related to higher perceptions of warmth, honesty, attractiveness and compassion in comparison with faces containing a more mature or dominant look (Zebrowitz & Montepare, 1992 ; Keating et al, 1999: 594).

For the purpose of this study the choice was made however to solely focus on the perception of honesty because first of all the literature is somewhat contradicting concerning the relationship between greater facial babyishness and increased attractiveness ratings. According to Keating, Randall and Kendrick, increased facial babyishness is related to a more attractive look (1999: 594). On the other hand Cunningham and others showed that women on average are more attracted towards men with a more mature and dominant look (Cunningham et al, 1990: 61). Because perceptions of warmth were heavily correlated with ratings of attractiveness in these studies it was chosen to leave out this attribution as well. The reasoning that greater facial babyishness is related to higher perceptions of honesty on the other hand is not contested in the literature (Cunningham et al, 1990: 61 ; Berry & McArthur, 1986: 5).

Regarding the perception of compassion, finding a correct Dutch translation of the term turned out to be difficult and because the study was held in the Netherlands, the effect of facial dominance or differently phrased facial babyishness on perceptions of compassion was not measured. The literal Dutch translation of the term would be: "compassie". However unlike in the English language, the word "compassie" is rarely used in Dutch language which could have troubled some of the respondents that would not know the exact meaning of the word. The closest word to compassie that is used more often in the Dutch language would be: "inlevingsvermogen" but this means: a person's ability to show empathy towards others. Because someone's ability to show empathy towards others is not the same as compassion, it was chosen to focus on the more straightforward attribution of honesty.

Dominance can be seen as an important character trait to study in the context of leadership perceptions because during research of unfamiliar faces, perceptions of dominance were highly correlated with perceptions of power (Keating et al, 1999: 599). An interesting study regarding this matter even showed strong evidence that the facial dominance of the graduates from a military academy in 1950 predicted the final rank they achieved at the end of their career (Mueller & Mazur, 1996: 823). The facial dominance of these graduates proved to be a predictor of how powerful they became (Mueller & Mazur, 1997). A political career is different from a military career off course, but one can imagine that a politician has potential benefits to gain from being perceived more powerful.

An important aspect of these possible benefits is that the public could have more faith in believing that the leader once elected will be powerful and strong enough to change the things he or she intends to change. The given example here reflects why certain perceptions of leaders can be considered important, as it has been previously argued by Aarts and other researchers on this topic. Even if there is no evidence that certain leadership perceptions directly influence election outcomes, it is often the case that these perceptions drive voting behaviour, the correlations are however not always visible on an aggregate level (Aarts et al., 2011: 3). It could for example be the case that certain voters are attracted towards a dominant and powerful leader, while just as many voters may prefer a less dominant and powerful leader, who may also be perceived more warm. Also, it could be the case that the public on average has no significantly different perception of how dominant two or more political candidates are in a given election. This however does not mean that these leadership perceptions do not drive voting behaviour or are unimportant to study.

This becomes even clearer due to studies of partisan preferences. Hayes for example provided evidence that in the American context, Republican leaders were viewed as stronger leaders and more moral than Democrat leaders. Democrat leaders in turn were seen as more

compassionate and emphatic on average. Each of these perceived candidate characteristics as he argues attract certain groups of voters (Hayes, 2005: 908). For Democrat and Republican leaders it is therefore important to bear this in mind and to make sure that certain expectations are met in order to attract certain voters. Hayes furthermore argued that in order to win an election a candidate has to successfully trespass on the opponent's trait territory, meaning a Democrat leader for example should make an effort to appear more moral and strong (Hayes, 2005: 920).

In short, perceptions of power and dominance are not directly related to voting behaviour as being perceived more powerful and dominant is not automatically related to an increased electoral support. However, perceptions of power and dominance are seen as important trait characteristics in the personalisation literature that directly influence the public image of a leader and at the same time have the potential to indirectly or directly influence voting behaviour (Hayes, 2005 ; Keating, 1999 ; Aarts et al., 2011: 3).

Perceptions of power, dominance and honesty are therefore important leadership perceptions that influence an overall positive or negative public image of the leader, honesty serving as an indicator of warmth and as an important leadership perception in itself. According to previous research these perceptions are influenced by the following facial features that were chosen to study: the hairline, the size of the eyes, lips and the size of the eyebrows. These four facial features were chosen because previous research of unfamiliar faces has shown that the status of these facial features influences perceptions of dominance and warmth (Zebrowitz & Montepare, 1992: 1143 ; Cunningham et al, 1990: 61).

The choice was made to focus on the leader's voice pitch because as it has already briefly been mentioned; previous research suggests that a leader's voice pitch has an effect on the perception of his or her power, dominance and in the case of male voices also attractiveness. Earlier research pointed out that a lower voice pitch is often perceived more

dominant, powerful and attractive in the case of male voices. This was also the main reason to select a male political leader as the object of study here. The first reason being that during previous research, a higher attractiveness of a politician's voice increased the average likelihood of respondents to vote for this politician (Surawski & Ossoff, 2006: 24-25 ; Tigue et al, 2011: 212). The second reason being that the voice pitch is the best feature of the voice to manipulate in the case of a well-known voice. A voice pitch manipulation does not change the voice to an extent that the voice becomes unrecognizable or in a way that respondents become aware of the vocal manipulation (Jones et al, 2010: 57).

The facial manipulation of this study is further explained in the methods section but most importantly this manipulation is expected to result in higher perceptions of power and dominance. The same is also expected from the voice pitch manipulation, therefore this study could possibly examine whether the voice pitch or the facial characteristics exert more influence on perceptions of power and dominance. What is also investigated in this study is how far stretching and serious one should consider the previous findings of the voice pitch study carried out by Tigue and others in 2012, involving the American ex-presidents.

On the basis of the American voice pitch study it is expected that lowering the voice pitch of a well known male politician results in the politician gaining more votes. If the lowered voice pitch still has such an effect during an experiment in which a visual stimulus is included, this will provide support for the idea that voice pitch influences voting behaviour. If there is no effect found however, the findings will support the idea that the influence of voice pitch on leadership perceptions and the likelihood of voting is rather limited. In that case the influence of voice pitch is likely to be limited to the effects of radio speeches and debates where one is not exposed to a visual stimulus. Based on the findings by Surawski and Ossoff one would expect that a politician's face has more effect on the way a politician is perceived than a politician's voice (Surawski & Ossoff, 2006: 24-25).

By examining the effect of voice pitch and the four mentioned facial features at the same time, this study examines which factors contribute to the perception of a leader's power, honesty and dominance, which is valuable information for leaders and citizens in order to understand the way a public image of a leader is shaped. Based on the discussed literature, the following hypotheses were formed with regard to the influence of voice pitch and facial dominance on voting behaviour and important leadership perceptions:

Hypothesis 1: Increasing a well known political leader's facial dominance results in the leader to be perceived more powerful and dominant and at the same time less honest by the public.

Hypothesis 2: A well known political leader speaking with a lower voice pitch is more likely to be perceived as dominant and powerful by the public.

Hypothesis 3: A well known male political leader speaking with a lower voice pitch is likely to receive an increased amount of electoral support.

Hypothesis 4: The facial features of a well known political leader have more influence on public perceptions of the leader's dominance and power than the leader's voice pitch.

Research methods

Case selection

The proposed research question has been investigated in the Netherlands through an experiment in which a total of 180 participants participated. Studies of the Dutch case on leadership effects have showed that parties are far more important than political candidates in order to predict voting outcomes and public support (Holsteyn & Andeweg, 2008: 116 ; Holsteyn & Andeweg, 2012: 183). On this matter although not all studies agree, Fiers and Krouwel argue that Dutch politics has become more personalized and that perceptions of leaders have become more important than the perceptions of parties (2008: 131). It is clear however that the effect of leaders in Dutch politics is limited compared to other political systems such as the British or American political system. Some even argue that by nature presidential or two-party systems are more centred on political leaders than are multi-party parliamentary systems (Karvonen, 2010: 6).

Despite these findings however, characteristics of an audience democracy have become more visible over time in the Netherlands (Brants & Voltmer, 2011: 68). An audience democracy versus a democracy with high levels of political participation is expected to be related to a larger or growing impact of political leaders and their personalities on public opinion and political life (Brants & Voltmer, 2011: 20). Still, it is clear that the implications of this study could have gained importance if the research had been carried out in a presidential or two-party parliamentary system. As argued earlier however, the size of the impact of leaders on election outcomes is not the only relevant factor. Public expectations concerning the future behaviour of leaders after the election can also be shaped by the personal characteristics of the leader.

The political leader that was chosen as the object of study is Balkenende, the former

Dutch prime-minister. It was chosen to focus on a Dutch prime-minister because the goal of this study is to see whether a different picture or vocal sound of the same person that comes packaged with a reputation can still lead to a different perception. If an effect is found this would make the strongest case that either or both a leader's voice pitch and/or facial dominance matters, because then even perceptions of this well known politician could be influenced by adjusting his face or adjusting his voice pitch.

Besides, because perceptions of current Dutch political leaders can change due to short-term media performances it is wiser to study the perceptions of a leader of whom the reputation is expected to be more stable and not likely to change within the three weeks of time the data was gathered. Therefore Balkenende was chosen because most Dutch citizens know him and already have judgements about him while he is not in politics anymore and accordingly his perceived reputation is unlikely to change in a short period of time.

Facial manipulation

The face of Balkenende was manipulated in order to create a more dominant look by enlarging his eyebrows, shortening his hairline and reducing the size of his eyes and lips. The study by Keating, Randall and Kendrick expected on the basis of studies of unfamiliar faces that enlarging the eyes and lips of three presidents would result in higher evaluations of their warmth while diminishing the perception of how powerful and dominant they were. Reducing the sizes of these facial features was expected to cause the opposite effect. Although the effects they found were not consistent for all three presidents, they were able to influence the way each president was judged. With this information in mind and because the respondents were not aware of the picture manipulations in their study, it was chosen in this study to manipulate the face of a well known politician even further. By not only reducing the size of the eyes and lips but by also enlarging the eyebrows and creating a receded hairline, more

effort was taken to create a more dominant look. The "normal" or unadjusted picture of Balkenende that was shown to half of the respondents in the experiment is displayed below:



Adjusting the normal picture in the described manner was expected to result in a lower perception of Balkenende's honesty and higher perceptions of his dominance and power. The adjustments led to the following manipulated picture:



Voice pitch manipulation

By adding Balkenende's voice to the experiment it was tested how much the influence of a politician's voice turns out to be when people are also exposed to a visual stimulus. The voice pitch was lowered by 20 hertz, this is an established voice pitch manipulation that follows from earlier research in which this manipulation was found to be effective (Tigue et al., 2012: 211). Respondents listened to a short speech of Balkenende that lasted 32 seconds in which he does not give a politically related opinion. In his speech he says the following words:

"Dames en heren, vorige maand sprak ik op het Catshuis, u weet dat is de officiële residentie van de Minister-President met een aantal inspirerende mensen, mensen die ik eerder had ontmoet tijdens werkbezoeken in het land en mensen met wie ik graag nog een keer wilde praten, u weet, het begin van het jaar is vaak de tijd van nieuwjaarsrecepties en ik heb gezegd nee ik wil is teruggrijpen op de ontmoetingen die ik vorig jaar heb gehad. Er waren ook mensen bij die ik nog nooit had gezien maar die zich onderscheiden door hun moed en betrokkenheid bij de Nederlandse samenleving".

Translated to English this is: Ladies and gentlemen, last month I spoke at the Catshuis, you are probably familiar that this is the official residency of the prime minister, with some inspiring people, people which I met earlier in our country en people I wished to talked to one more time. You are probably aware that the beginning of the year is the time of new year receptions and I said no I want to come back to the meetings I had last year. There were also people whom I had never seen but who had distinguished themselves by their courage relating to and involvement in the Dutch society.

Experimental design

In order to measure the effect of the voice pitch and photographs separately, a 2*3 factorial design was used containing 6 groups of respondents. Each group contained 30 participants, resulting in a total number of 180 participants. Two groups of respondents were exposed to either the average or the manipulated photograph without being exposed to the voice of Balkenende. The other four groups were exposed to either the normal voice or the manipulated voice of Balkenende combined with either the normal picture or the manipulated picture. The questions in the survey were the same for all 180 participants, including the dependent variables: honesty, likelihood to vote for Balkenende if he hypothetically would return to politics, dominance and power. Also, familiarity with the person (Balkenende) displayed on the picture of the survey was measured. Familiarity with the person visible on the photograph was measured in order to test whether people still recognized him if they were exposed to the manipulated picture, as a logical result, the name Balkenende was not mentioned in the survey.

Honesty was chosen as a dependent measure because as it is suggested by previous research, the status of the facial characteristics being manipulated in this experiment are expected to influence perceptions of honesty and warmth in the sense that due to the facial manipulation in this study, Balkenende is expected to be perceived less warm and less honest. Instead of examining perceptions of warmth, which is a more general term for attributions such as attractiveness and compassion, it was chosen to examine the more specific perception of honesty for reasons previously explained in the literature section of this study. The likelihood to vote for Balkenende in a hypothetical election was measured because this seemed the most appropriate way to measure the effect of the different voice conditions on voting behaviour. Because Balkenende is an ex-politician, a hypothetical situation had to be described to the respondents in which Balkenende would return to politics. As discussed

earlier, on the basis of previous studies it was expected that lowering Balkenende's voice pitch would cause a positive effect on the average likelihood of respondents to vote for him.

Perceptions of power were measured on a scale of 1 (not powerful) to 7 (very powerful), dominance accordingly was measured on a scale of 1 (not dominant) to 7 (very dominant) and honesty was measured on the same scale ranging from 1 (honest) to 7 (dishonest). The likelihood to vote for Balkenende if he hypothetically would return to politics was measured on a scale from 1 (very unlikely) to 7 (very likely). The seven point scale used for honesty was recoded for the statistical analyses displayed in the results section in order to make sure that a higher score implicated a higher perception of Balkenende's honesty. Due to this recoding all scales used in the statistical analyses are based on the same principle; a higher score means a higher perception of dominance, power, honesty or a higher likelihood to vote for Balkenende. Familiarity with the person visible on the photograph was also measured on a seven point scale, ranging from "not familiar" to "very familiar".

The following control variables were also included: political preference, left-right self rating, did you vote for Balkenende in the past?, age, gender. These control variables had to control for the differences between participants of the six different groups. Left-right self rating was measured on a scale from 0 (extremely leftwing) to 10 (extremely rightwing). It was chosen to include political preference as a control variable because previous literature showed that political parties remain a strong predictor of Dutch voting behaviour. Identifying with a certain political party may therefore explain the way Balkenende is evaluated and the average likelihood to vote for him in a hypothetical election given the expectation that most respondents will remember him as the former leader of the CDA.

Furthermore, in the Dutch case where coalition-governments are formed, each party is more friendly towards parties that share their views to a certain extent, resulting in the finding that each party prefers certain other parties to cooperate with during a coalition-government.

The preferences of parties and voters for certain coalitions can be explained partly by placing each party on a left-right scale, hence it was chosen to include "left-right self rating" as one of the control variables. Parties on the left side of the scale are for example more likely to work with each other during a coalition-government than are a party on the far left side of the scale and a party on the right side of the scale. The CDA has for example cooperated with the VVD in multiple occasions to form a coalition government. Respondents preferring the VVD could therefore easily rate Balkenende in a more favourable way than respondents who prefer a party that is more distant to the CDA in terms of their preferences regarding coalition-governments, the perceived place of the CDA on a left-right scale and their own perceived place on a left-right scale.

In short, voters could evaluate Balkenende in a way that is heavily influenced by associating him with the CDA. In order to control for this association and the respondents thoughts towards the CDA, party preference and left-right self rating are included as control variables. The control variable: "did you vote for Balkenende in the past?" is important in order to control for intergroup differences regarding the dependent variable that measures the likelihood to vote for Balkenende in a hypothetical election. One may logically expect that a respondent who voted for Balkenende in the past is more likely to vote for him again if he were to return to politics.

Data collection

The experiment contained 6 groups of 30 respondents, 4 of these 6 groups and thus 120 respondents participated in the experiment while being in a silent environment, otherwise street noise and other noises could have distracted the respondents while they listened to the voice of Balkenende. Therefore, these 120 participants listened to Balkenende's voice at their own home using a headphone that was provided to them. The 60 respondents that participated in the other two groups did not participate in the experiment while being in a silent environment because for these respondents this condition was unnecessary since they were not exposed to the voice of Balkenende. The data from these 60 respondents was gathered in one day within 5 hours in front of a supermarket in Leiden. The people approached at home were told the following:

Hello sir/madam, let me introduce myself, I am Corné Anceaux, a political science student in Leiden and I ringed the doorbell to ask if you could participate in my study by answering a short survey, would you mind helping me out? If the answer was yes, I told them: That's great, part of the survey is to listen to a short speech of 32 seconds (showing the headphone).

After they had listened to the speech the respondents were told it was also important in the interest of the investigation that the researcher was not in their presence while they filled in the survey, they were therefore kindly asked to fill in the survey without any rush while I would proceed to ring the doorbell of others living in their street. It was also asked of them to (if possible) put the completed survey on the outside of their mailbox so it was not necessary to ring the doorbell again in order to collect the completed survey.

The data was gathered in the time period between April 15th 2013 and the 9th of May 2013, in three weeks and three days. It was expected that half of the people approached at home would refuse to cooperate, in fact only 23 people approached at home refused to

cooperate, compared to a total of 120 people that participated, resulting in a cooperation rate of 84%. Far more people refused to cooperate in front of the supermarket. While gathering the data from these sixty respondents, 45 people refused to cooperate, resulting in a cooperation rate of 57%. Accordingly, the total cooperation rate for all 180 respondents was 73%. In each of the four groups exposed to the voice, 15 respondents from the total of 30 respondents were approached at student homes. This choice was made because students turned out to be very willing to cooperate. In order to prevent collecting a sample that would contain only students, half of the respondents in each of the experimental groups exposed to the voice were approached at houses in regular streets. This led to a total sample containing 71 respondents of the age 18 till 25 (largely students), 27 respondents of the age 26 till 40 and a total of 82 respondents older than 40.

Results

In order to test the hypotheses, first of all the mean scores of the different experimental groups were compared. The impact of Balkenende's voice was measured through a one-way ANOVA analysis because three experimental conditions were compared: no voice, the manipulated voice, the normal voice. With regard to the effect of Balkenende's face, a t-test was conducted to compare the mean evaluations of the group exposed to his normal face with the mean evaluations of the group exposed to the manipulated picture. The effects of the voice and face were furthermore tested separately through two linear regression analyses which included the earlier mentioned control variables. After separately measuring the effect of Balkenende's voice and face, a multivariate analysis of variance (MANOVA-test) measured the combined effect of the voice and face on perceptions of dominance and power and two factorial analysis of variance (factorial ANOVA's) measured this separately for the likelihood of voting and perceptions of honesty.

With regard to the overall evaluations of Balkenende by all respondents it must be noted that he was perceived nearly as dominant ($M = 4.56$, $SD = 1.30$) by all 180 respondents as he was perceived powerful ($M = 4.31$, $SD = 1.25$). Perceptions of power and dominance accordingly turned out to be highly correlated ($r = .45$, $p < .001$), the correlation however did not pose a problem of multicollinearity ($\alpha = .62$). Perceptions of honesty ($M = 3.86$, $SD = 1.51$) were not correlated with perceptions of dominance or power. Besides, Balkenende was not evaluated very positively on average regarding the likelihood of respondents to vote for him in a hypothetical election ($M = 2.17$, $SD = 1.33$).

Results of visual stimulus

The first hypothesis has been tested by an independent samples t-test which measured the impact of the facial manipulation on the way respondents evaluated Balkenende. The analysis

includes all 180 respondents, 90 respondents in total were exposed to Balkenende's normal face and the other 90 respondents were exposed to the manipulated version of his face. A required condition in order to test the first hypothesis however is that people were not significantly less familiar with Balkenende when exposed to the manipulated picture ($M = 5.79$, $SD = 1.29$) in comparison to the respondents exposed to the normal picture ($M = 5.87$, $SD = 1.31$, $t = .40$, ns). Fortunately this condition was met.

Balkenende was perceived a bit more honest on average by the respondents who were exposed to his regular face ($M = 3.98$, $SD = 1.41$) compared to the respondents exposed to the manipulated face ($M = 3.73$, $SD = 1.61$, $t = 1.10$, ns), this difference however is not significant and very small. The findings therefore do not support the first hypothesis. Regarding perceptions of dominance, Balkenende was perceived slightly more dominant by the respondents exposed to his dominant face ($M = 4.60$, $SD = 1.31$) in comparison with the respondents exposed to his normal face ($M = 4.52$, $SD = 1.30$, $t = .40$, ns), however this difference is also not significant and very small.

Balkenende was also even perceived slightly more powerful by the respondents exposed to the normal picture ($M = 4.34$, $SD = 1.25$) compared to the respondents exposed to the manipulated picture ($M = 4.27$, $SD = 1.25$, $t = .42$, ns). Again however this difference was not significant. Based on the findings so far the results do not support the first hypothesis, the facial manipulation did not seem to make a difference for the way respondents evaluated Balkenende's honesty, power or dominance.

The results found when adding the control variables into a least squares linear regression model are displayed in table 1, at page 27. Adding the control variables improves the analysis first of all because there is always the possibility that the small differences that were found regarding the way Balkenende was evaluated appear significant when relevant control variables are added to the analysis. Second of all, by adding the control variable

"political preference" certain correlations may appear between party preference and perceptions of Balkenende. This is logically expected because many respondents most likely remember him first of all as the former political leader of the CDA. As it has been discussed earlier in this study, party preferences are expected to be a strong predictor of Dutch voting behavior and this may therefore partly explain how a former political leader is evaluated. Most importantly, the political preference variable had to control for the respondents who preferred the political party CDA. Unfortunately, among the total sample of 180 participants, only 6 people stated to prefer the CDA.

In order to come up with a solution for this problem, it was decided to group the political preferences of respondents that preferred a Christian party together. Besides the CDA there are two other Christian parties in the Dutch parliament: the CU and SGP. Although these parties advocate very different policies in many ways, one can expect that most voters who identify with one of these Christian parties would rather prefer a prime-minister who is attached to a Christian party than a prime minister who is attached to a non-Christian party. Therefore one may logically expect that Balkenende being the former leader of the biggest Christian party will be evaluated more positively by people who identify with a Christian party. Grouping these preferences together resulted in a total of 14 respondents who preferred a Christian party. Other parties that received a very low amount of support among the total sample were excluded from the analysis, involving the parties: PvdD, 50plus and PVV. Each of these three parties were preferred by less than six respondents in the total sample. It was decided therefore that the amount of support for these parties among the sample was too small to potentially indicate why Balkenende was evaluated in a certain way.

Table 1. Effect of picture manipulation on perceptions of dominance, honesty, power and the likelihood of voting.

	Dominance	Power	Honesty	Voting
Picture manipulation	-.008 (.198)	-.137 (.195)	-.267 (.233)	.089 (.180)
Age	.017 * (.006)	.004 (.006)	.000 (.007)	-.016 * (.005)
Gender	-.120 (.199)	.131 (.196)	.216 (.234)	.340 (.181)
Did you vote for this Politician in the past?	.406 (.290)	.266 (.285)	-.425 (.341)	-1.257 ** (.263)
Left-right self rating	.003 (.057)	-.040 (.056)	.117 (.067)	.098 (.052)
Political preference Christian party	.613 (.454)	.426 (.447)	.577 (.535)	.871 * (.413)
Political preference PvdA	-.076 (.361)	-.170 (.356)	.956 * (.426)	.156 (.328)
Political preference GroenLinks	-.003 (.465)	-.258 (.458)	.366 (.548)	-.017 (.423)
Political preference SP	.407 (.404)	-.232 (.398)	1.031 * (.476)	-.275 (.367)
Political preference D66	.571 (.352)	.569 (.347)	1.040 * (.415)	.204 (.320)
Political preference VVD	-.264 (.378)	.200 (.373)	.770 (.446)	.235 (.344)
Constant	3.158 ** (.935)	3.749 ** (.921)	3.386 * (1.102)	3.849 ** (.850)
N	180	180	180	180
R2	.112	.065	.092	.287

* = $p \leq ,05$ ** = $p \leq ,001$

Unstandardized regression coefficients and standard errors in parentheses

As it is shown in table 1, the results do not support the first hypothesis, no significant correlations were found between Balkenende's facial dominance and perceptions of dominance, honesty and power. No significant relationship was found either between the picture manipulation and the likelihood to vote for Balkenende. Besides, the results suggest that the older the person, the more likely Balkenende will be perceived as dominant. This correlation was not found regarding the perception of Balkenende's power, despite the earlier mentioned significant correlation between perceptions of power ($M = 4.31$, $SD = 1.25$) and

perceptions of dominance ($M = 4.56$, $SD = 1.30$, $r = .45$, $p < .001$). With regard to the likelihood of voting, a few control variables are significantly predicting the voting intentions of the respondents. People who voted for Balkenende in the past are more likely to vote for him again and as one may also expect it was found that people who identify with a Christian party are more likely to vote for Balkenende in comparison to the other respondents in the sample. Surprisingly it was also found that the respondents preferring the PvdA, D66 or the SP held significantly higher perceptions of Balkenende's honesty on average. The biggest mean difference for perceptions of honesty was found with regard to the respondents who preferred D66. It must be noted however that the mean difference between participants who preferred D66 ($M = 4.11$, $SD = 1.56$) and the other participants ($M = 3.79$, $SD = 1.50$) can be considered relatively small in the context of a seven point scale.

Results of vocal stimulus

What is interesting and unexpected is that Balkenende was perceived a bit less honest on average by those listening to the manipulated voice ($M = 3.48$, $SD = 1.42$) in comparison to those listening to either the normal voice ($M = 4.03$, $SD = 1.50$) or no voice ($M = 4.05$, $SD = 1.58$, $F = 2.78$, $p = .065$). The differences between the group means are almost significant, but this still counts as an insignificant result. Balkenende was perceived the most dominant on average by the respondents who were not exposed to his voice ($M = 4.70$, $SD = 1.27$) compared to the respondents that listened to his normal voice ($M = 4.58$, $SD = 1.23$) and compared to the participants that listened to the manipulated voice ($M = 4.40$, $SD = 1.41$, $F = .811$, ns). Very small non-significant differences between the three group means were found however.

Balkenende's voice does not appear to be very popular as the respondents that did not

hear his voice were the most willing on average to vote for him ($M = 2.40$, $SD = 1.44$) compared to the respondents that listened to his lower pitched voice ($M = 1.98$, $SD = 1.35$) and the respondents that listened to his normal voice ($M = 2.12$, $SD = 1.17$, $F = 1.55$, ns). The differences between the group means are slightly bigger than the differences found regarding dominance perceptions but they are also not significant.

Besides these findings, Balkenende was perceived the most powerful by the respondents who were not exposed to his voice ($M = 4.52$, $SD = 1.16$) in comparison to the respondents listening to his normal voice ($M = 4.35$, $SD = 1.27$) and the ones listening to the manipulated voice ($M = 4.05$, $SD = 1.28$, $F = 2.188$, ns). The differences between the group means are however also not significant with regard to perceptions of power. What is furthermore interesting and unexpected is that Balkenende is perceived slightly more powerful by those that listened to his normal voice in comparison to those who listened to the lower pitched voice.

Although this difference is small and not significant, the direction of the difference is contrary to what one could logically expect on the basis of findings in earlier studies. An overview of the results including the control variables is to be seen in table 2. Two dummy variables were created in this regression analysis: "deep voice" and "no voice" in order to compare the means and variances of the lower pitched voice (deep voice) and the no voice condition to the normal voice condition.

Table 2. Effect of voice on perceptions of dominance, honesty, power and the likelihood of voting.

	Dominance	Power	Honesty	Voting
Deep voice (lower voice pitch)	-.219 (.235)	-.364 (.230)	-.477 (.276)	-.168 (.211)
No voice	.064 (.243)	.080 (.238)	-.023 (.285)	.334 (.218)
Age	.017 * (.006)	.004 (.006)	.000 (.007)	-.016 * (.005)
Gender	-.125 (.198)	.130 (.194)	.223 (.233)	.326 (.178)
Did you vote for this Politician in the past?	.402 (.289)	.268 (.283)	-.422 (.340)	-1.251 ** (.260)
Left-right self rating	-.003 (.057)	-.054 (.056)	.100 (.067)	.091 (.051)
Political preference Christian party	.642 (.458)	.457 (.449)	.610 (.538)	.970 * (.412)
Political preference PvdA	-.104 (.359)	-.185 (.352)	.955 * (.422)	.118 (.323)
Political preference GroenLinks	-.057 (.464)	-.317 (.455)	.324 (.546)	-.116 (.418)
Political preference SP	.339 (.407)	-.325 (.399)	.928 * (.479)	-.355 (.366)
Political preference D66	.508 (.357)	.475 (.349)	.953 * (.419)	.076 (.321)
Political preference VVD	-.308 (.372)	.177 (.364)	.783 (.437)	.144 (.334)
Constant	3.283 ** (.884)	3.731 ** (.865)	3.238 * (1.038)	4.040 ** (.795)
N	180	180	180	180
R2	.112	.065	.092	.287

* = $p \leq ,05$ ** = $p \leq ,001$

Unstandardized regression coefficients and standard errors in parentheses

The results shown in table 2 do not support the second and third hypothesis. The respondents that participated in the experiment did not perceive Balkenende significantly more or less powerful or dominant due to the different voice conditions. Also, the average likelihood to vote for Balkenende was not influenced by the different voice conditions. The results of the control variables are similar to the ones found in table 1.

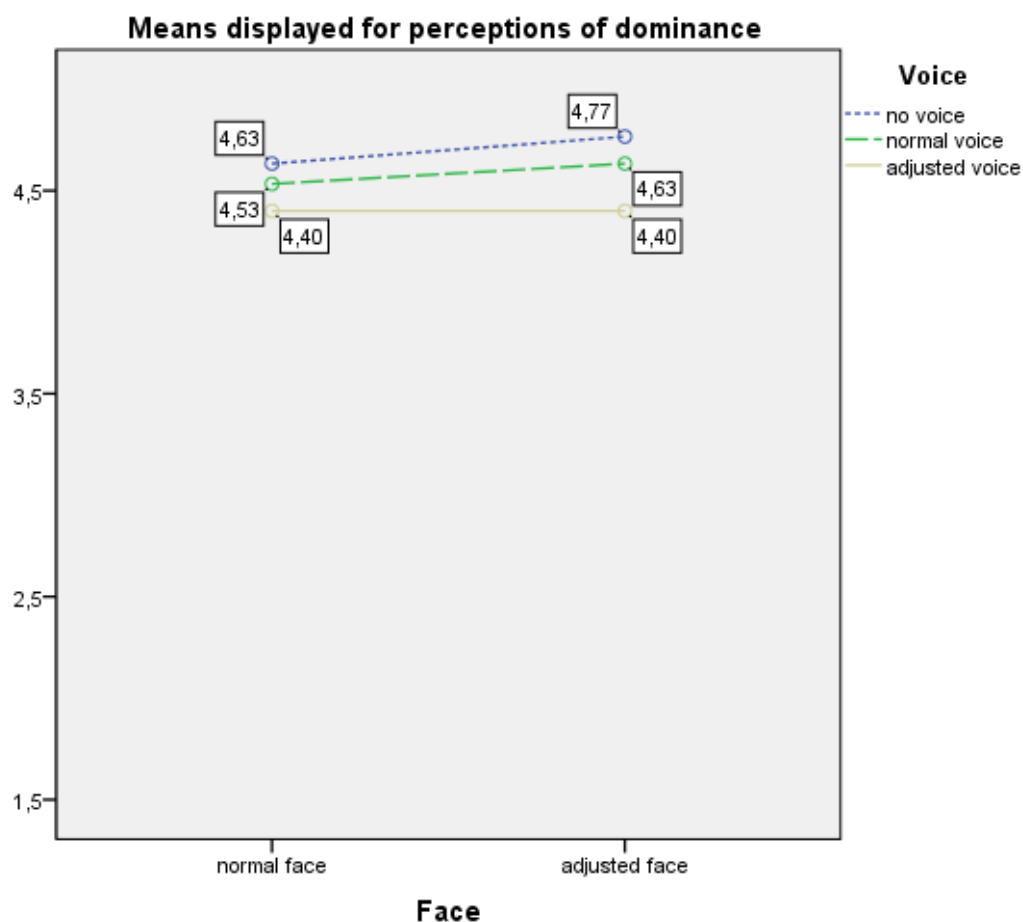
The combined influence of voice pitch and facial characteristics.

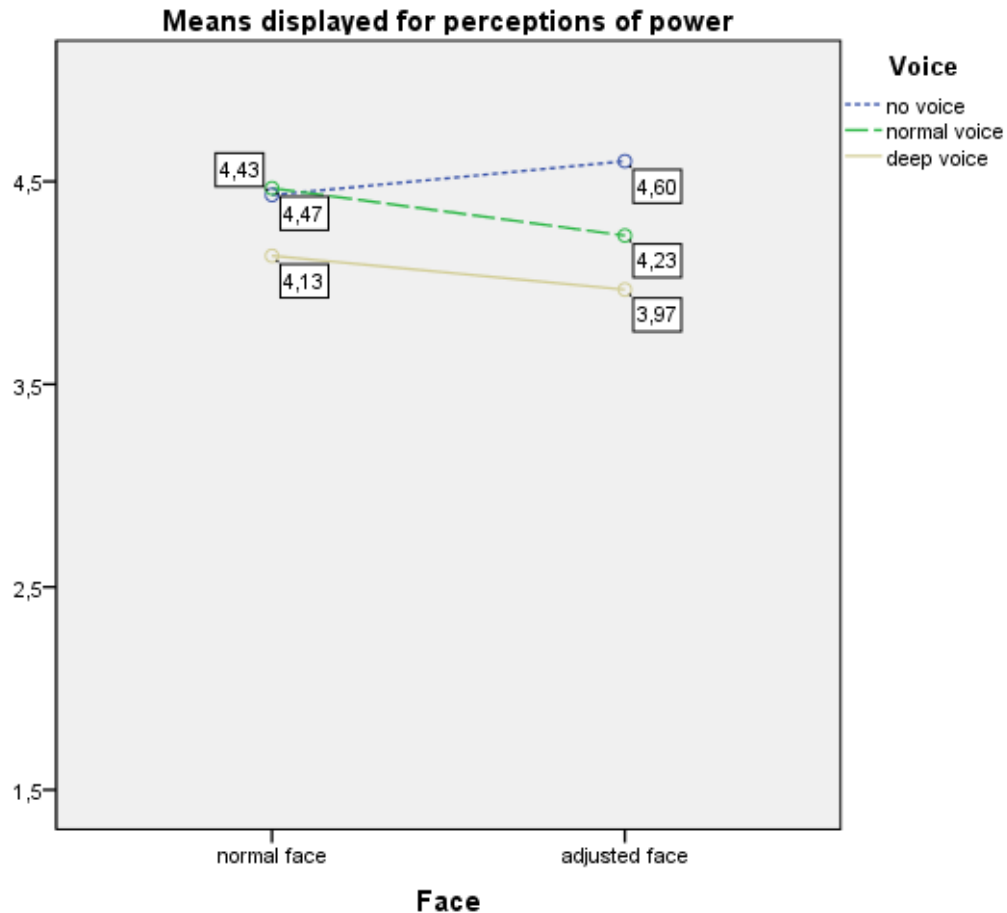
The mean differences between the six experimental groups were examined in three steps. In the first step, a multivariate analysis of variance (MANOVA) was conducted to examine the effect of Balkenende's voice and face on perceptions of dominance and power. It was chosen to perform this analysis because both the voice pitch manipulation and the facial manipulation were expected to cause higher perceptions of dominance and power. According to Field, a MANOVA has greater power if the group differences are in the same direction for each measure (2005: 573). The expectations concerning perceptions of honesty differ from the expectations related to power and dominance. While the facial manipulation is expected to be related to higher perceptions of dominance and power, it is at the same time expected to be related to lower perceptions of honesty.

Besides, it was not expected that the facial manipulation would have an effect on the likelihood of voting, adding the likelihood of voting to the MANOVA therefore does not strengthen the model. The MANOVA carried out to measure the effect of the voice and face on perceptions of dominance and power fits the intentions of this study better compared to two separate factorial ANOVA's mainly because it has the potential to discover relationships between dependent measures. This means that while for example the combined effect of the voice and face has no effect on perceptions of power or dominance when separately measured, an effect may be found when scores related to dominance and power are combined. As it has been argued earlier, perceptions of power and dominance are expected to be correlated and this proved to be true also in this study.

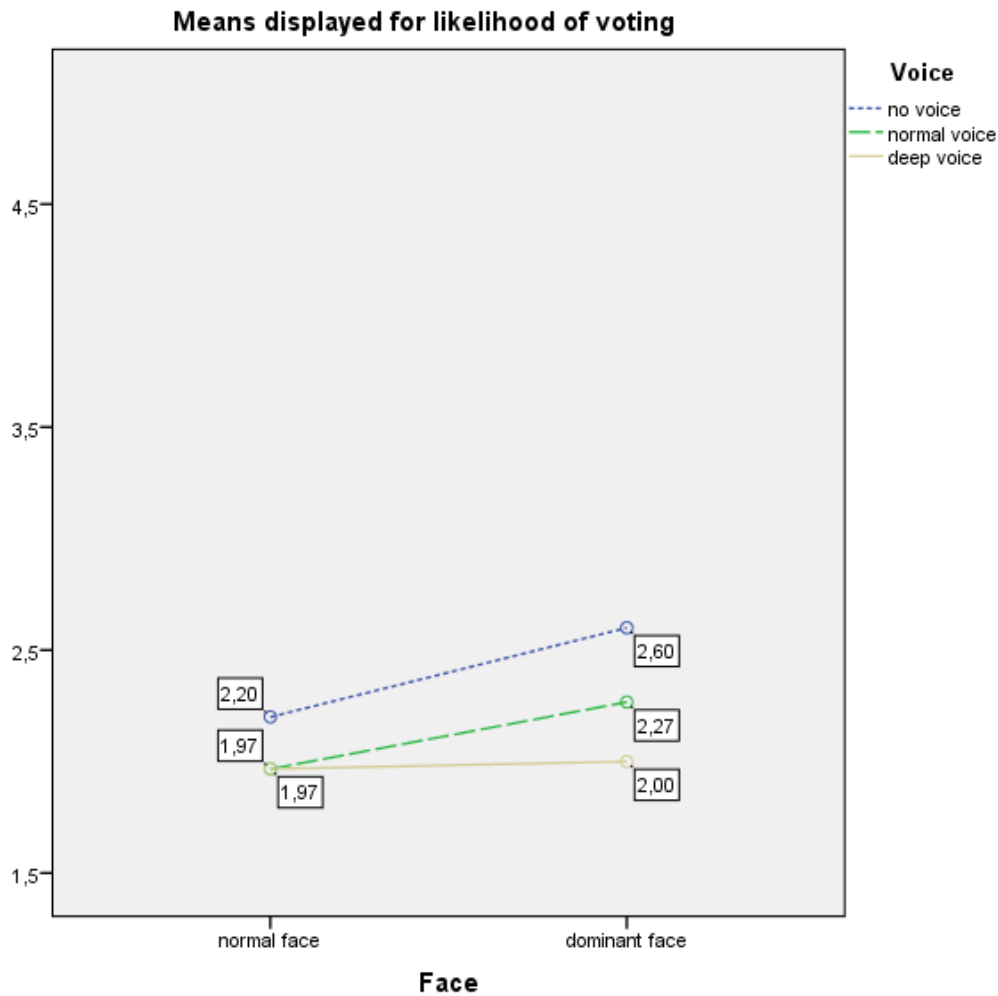
No common expectations exist for honesty and the likelihood of voting with regard to the different voice and face conditions, therefore these two dependent measures were examined through two factorial ANOVA's. It was chosen for the MANOVA to test significance through the test statistic known as Pillai's trace, because in this study the groups

differ along more than one variate and this is therefore recommended (Field, 2005: 594). In all these three analyses, the same control variables that were used in the previous tests were also included here as covariates. The multivariate effect of Balkenende's voice and face on perceptions of dominance and power did not prove to be significant ($F = .25$, ns). The same was true for the separate effect of Balkenende's face ($F = .32$, ns) and Balkenende's voice ($F = 1.11$, ns) on perceptions of power and dominance. The means for the six different groups with regard to perceptions of dominance and power are displayed in the following two graphs:





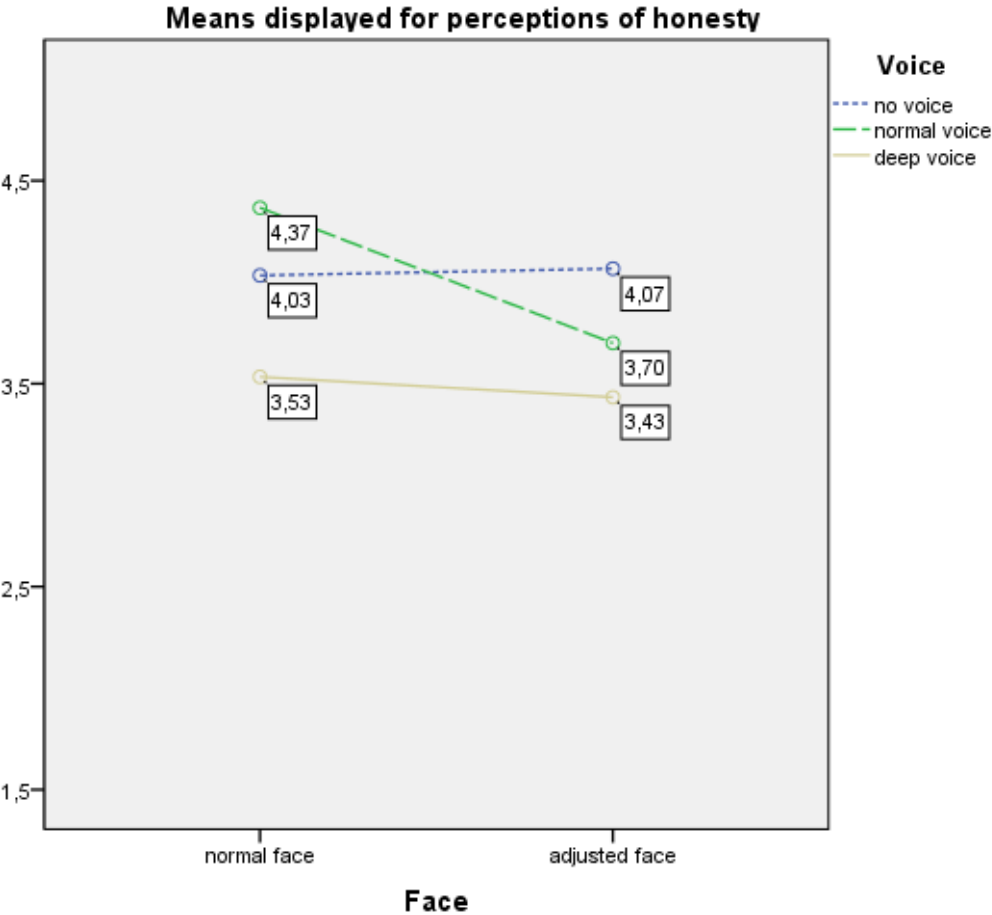
With regard to the control variables, only age turned out to be a significant predictor of dominance and power perceptions ($F = 4.57, p < .05$) in the sense that the older the respondent, the more likely Balkenende was evaluated as dominant and powerful. Besides, the third graph shows that no large differences between the means of the six experimental groups were found with regard to the likelihood of voting, resulting in the finding that no significant effect was found from the combined influence of Balkenende's voice and face ($F = 1.27, ns$). Regarding the control variables, no surprises were found as the same three control variables were significant that appeared to be significant in the previous analyses displayed in table 1 and 2, involving: age, whether someone voted for Balkenende in the past and whether a Christian party was preferred by the respondent.



Similar results were found regarding perceptions of honesty, no significant effect was found that was caused by the combined influence of different voice or facial conditions ($F = .904$, ns). More information related to the perception of Balkenende's honesty is shown in the fourth graph. As the graph shows, the mean differences for perceptions of honesty are larger compared to the differences found for the likelihood of voting. What becomes furthermore even clearer from the graph is the earlier discussed almost significant difference between the "deep voice" condition and the other two voice conditions.

The graph also shows that Balkenende was perceived most honest by respondents who were exposed to his normal face and normal voice and the most dishonest by respondents that were exposed to both the manipulated picture and the manipulated voice. With regard to the

normal face condition this could have been expected from the literature, however the biggest differences between the group means are caused by the different voice conditions. The difference between the deep voice and the normal voice is furthermore contrary to the findings of earlier studies. Regarding the control variables, preferring the political party D66 or PvdA was related to higher perceptions of Balkenende's honesty on average, as was the case in the previous analyses. Contrary to the findings displayed in table 1 and 2, preferring the SP did not prove a significant predictor anymore for perceptions of honesty ($F = 3,26, p = .07$).



On the basis of the results found in this study it is hard to give an answer to the fourth hypothesis since neither a comparison between the facial conditions nor the voice conditions caused a significant effect on perceptions of power or dominance.

Discussion of results

The findings in this study do not support any of the four hypotheses. Furthermore, because no significant effect of either the voice pitch manipulation or the picture manipulation was found, the data does not support or contradict the fourth hypothesis in this study. An important consideration with regard to these results is the fact that a known politician was studied. As noted earlier, measuring effects of vocal or facial characteristics for well known leaders is an entirely different story. Where one would expect a large effect in the case of unknown voices or faces, only a subtle effect is expected for a known voice or face.

However, the voice pitch study carried out by Tigue and others showed a large effect of voice pitch on perceptions of well known ex-presidents of the United States (Tigue et al., 2012: 212). Two possible explanations for the different results found in this study when compared to their study should be considered. The first and most important one is the study design. While during this experiment the attention of respondents was not entirely focused on the voice due to the visual stimulus, the study carried out by Tigue and others focused entirely on the voice. Furthermore, during their experiment respondents listened to two voices and were forced to choose one of them. Respondents in their study had to choose which of the two voices sounded more attractive, dominant, powerful and so on (Tigue et al., 2012: 211).

Their experimental design can therefore hardly be compared to a real situation in which respondents make up their mind about political candidates. The results found in this study therefore support the idea that the influence of voice pitch on voting behaviour and leadership perceptions can be considered very small. An effect due to a voice pitch manipulation may also only be found when people are told to focus on a leader's voice. Further research will have to clarify this because all respondents in this experiment were exposed to a visual image. It is still possible therefore that the voice pitch matters during radio debates or other situations in which citizens are only exposed to the voice of a leader.

A famous example indicating that vocal features such as voice pitch may matter in these situations is the Nixon-Kennedy debate from 1960. After the debate, radio listeners thought that Nixon had won the debate while people who watched the debate on television thought Kennedy had won (Druckman, 2003:563). When listening to the debate, it can be clearly noticed that Nixon's voice pitch is lower on average than Kennedy's voice pitch, which might have been one of the reasons Nixon was favoured by radio listeners. The influence of a leader's voice pitch in these circumstances can be tested in future research by an experiment that does not force respondents to choose a voice or focus on the voice, yet still only exposes the respondents to the voice of a known leader. The results found in this study support the idea that when respondents are exposed to a visual stimulus, the possible impact of a leader's voice pitch fades.

Another reason that may explain the findings regarding the likelihood of voting may be the unpopularity of the CDA these days, the party of which Balkenende is the former political leader. The CDA has lost a tremendous amount of electoral support during the last two national elections which is also reflected in the sample of the survey. While 23 people stated to have voted for Balkenende in the past, only 6 respondents preferred the CDA at this moment. Previous research on the Dutch case furthermore indicated that parties are far more influential than political leaders regarding voting outcomes and public support (Holsteyn & Andeweg, 2008: 116 ; Holsteyn & Andeweg, 2012: 183). This could therefore have been the reason that the average likelihood to vote for Balkenende turned out to be 2.17 on a scale ranging from 1 to 7. However, this conclusion of guilt by association one may draw based on the Dutch voting behaviour and the fact that the CDA has lost much electoral support is not necessarily an explanation for people's perception of Balkenende's honesty, power and dominance. The scores regarding these attributions do not indicate Balkenende was perceived very negative, many respondents that were unwilling to vote for Balkenende still perceived

him to be relatively powerful and/or honest. Concerning the likelihood of voting however, the fact that the sample did not contain many CDA-sympathizers can be considered a good reason no effect was found from the voice pitch manipulation.

Surprisingly, Balkenende was perceived more honest when respondents listened to his normal voice, in comparison to the manipulated voice and the no voice condition, this difference came very close to being significant. These results contradict the literature, the study by Tigue and others showed evidence that a lower voice pitch was related to higher perceptions of honesty, even in the case of well known voices (Tigue et al., 2012: 212). Further research therefore seems necessary to clarify the relationship between voice pitch and honesty perceptions.

Possible explanations of why the picture manipulation had no significant effect on the way Balkenende was perceived are harder to find. As discussed earlier, the picture manipulation was based on a previous study carried out by Keating, Rendell and Kendrick in 1999. In their experiment they were able to influence character judgements regarding all three presidents involved through a manipulated picture. While their experiment only adjusted the size of the eyes and lips, this study went even further by also changing the hairline and adjusting the eyebrows. The fact that the leader's voice was part of this experiment does not seem to make a difference, since no big differences were found between the two groups that were not exposed to the voice and the four groups of respondents that were exposed to the voice.

The fact that no significant relationship was found in this study could have been caused by the different political environment in which this study was carried out; the Dutch multi-party parliamentary system versus the American presidential system. To examine this, party preference and left-right self rating were measured as control variables. Preferences for three Dutch political parties, namely PvdA, D66 and SP turned out to be related to perceptions

of honesty, in the sense that respondents who preferred one of these parties perceived Balkenende to be slightly more honest.

The significant differences found however were very small and also not in an expected direction, as one would expect Balkenende to be perceived less honest by the respondents preferring one of these parties. The reason being that these parties are not close or friendly towards Balkenende's former party the CDA in the Dutch political context, the possible exception being D66. However regardless of the slightly more positive evaluations by D66 voters, no significant relationship was found between the respondents who preferred a Christian party and perceptions of Balkenende's honesty, while the CDA is a Christian party and the other two Christian parties are expected to be closer and more friendly towards the CDA than the PvdA and the SP.

Another possible reason for the different findings in this study compared to the study by Keating, Rendell and Kendrick may be found in the slightly different way the survey questions were phrased. Perceptions of dominance, honesty and power were measured in the following manner: How powerful, honest or dominant do you think this politician was during his political career? It is possible that the part of the question "during his political career" influenced people to think more deeply or rationally, where they otherwise would have given a more immediate response.

If future research would suggest that this is the reason for the different outcome of this study then this would be an important finding. If the influence of a well known leader's facial characteristics can be diminished so relatively easy then this supports the idea that in real situations in which the leader also advocates certain policies, citizens will also think more deeply and rationally about the leader and are therefore not so much influenced by the facial dominance of the leader.

On the other hand, perceptions of Balkenende in this study could have been partly

based on judgments made about his physical appearance long before the respondents were exposed to the picture of him in the survey. Therefore, one picture may not change longer existing perceptions of Balkenende's facial appearance, especially when the emphasis in the survey questions is placed on his political career. As discussed earlier, it is expected from the literature that the facial appearance of leaders largely has a subconscious impact on people's judgements. Although it was found that perceptions of leaders are mostly shaped by perceptions in the "professional" category, or perceptions of their competence, reliability and integrity (Miller et al, 1986: 530 ; Hermans & Vergeer, 2012: 72), the literature also suggested that these important leadership perceptions were shaped by a leader's facial appearance.

In all studies on the impact of facial appearance, the effects that were found were on a subconscious level, since not many people would for example consciously argue a better looking leader to be more competent because of his looks. Due to the subconscious nature of these facial effects, it is very hard to examine their exact influence on the perception of a political leader. The findings in this study indicate the limits of this influence, but it remains unclear at which point the influence of a leader's facial characteristics becomes very small or irrelevant.

Conclusion

The research question of this study has been centred around the influence of voice pitch and facial dominance regarding the perception of a well known political leader. Through an experiment conducted in the Netherlands in which respondents were exposed to both the voice and face of a well known ex-political leader this influence has been tested. A picture showing the face of the ex-politician Balkenende was manipulated in order to make his face look more dominant. Besides, his voice was manipulated through a lowered voice pitch. Based on the findings of previous research it was expected that this voice pitch manipulation would increase the average willingness of respondents to vote for him during an election. Also, it was expected that the lowered voice pitch would result in the ex-politician to be perceived more dominant and powerful. The manipulated picture was expected to result in higher perceptions of power and dominance while at the same time causing the leader to be perceived less honest.

The results showed no significant relationship between the voice pitch and the voting intentions of respondents. This is not very surprising as only one published study so far had suggested the existence of a relationship between a well known politician's voice pitch and voting behaviour, involving the voices of American ex-presidents. The reason for the different results found in this study is most likely related to the different experimental design employed in this study compared to the experimental design of the study involving the American ex-presidents. While their study forced the respondents to choose a voice which they were more likely to vote for, this study provided a setting in which the respondents were exposed to both the voice and face of a well known politician. Also, the respondents in this study were not forced to choose a voice they would rather vote for but merely asked how likely they would vote for the ex-politician if he would return to politics.

Besides, the voice pitch manipulation and picture manipulation had no significant effect on perceptions of dominance, honesty and power. An important consideration regarding this finding is the fact that a known figure was studied, numerous studies of unfamiliar voices and faces have shown the importance of a person's facial dominance and the height of a person's voice pitch regarding perceptions of dominance, power and honesty.

A previous study on the other hand found that a picture manipulation similar to the one in this experiment caused a significant effect on perceptions of dominance and power regarding three American presidents. It has been mentioned in the introduction of this study that a different effect from the picture manipulation could be found due to the different political context of the Dutch multi-party parliamentary system compared to the American presidential system. To examine whether this could be the reason for a possibly different outcome, party preference and left-right self rating were included as control variables in the experiment. However, the main results regarding these control variables do not indicate that no effect of the picture manipulation was found due to the study being carried out in a different political system in which parties are expected to be more important to voters than political candidates.

Regardless of these results however, the different nature of the two political systems is still expected to be important when examining potential factors that can shape the public image of a leader. Through reviewing the personalisation literature, one may draw the conclusion that in multi-party parliamentary systems, leaders are less important in order to predict voting outcomes than are leaders in presidential systems or two-party parliamentary systems. Therefore one may still logically expect that leadership perceptions in multi-party parliamentary systems are shaped more often by associating the leaders with their political parties. One of the findings in this study does also support this idea, because the average willingness of respondents to vote for Balkenende was very low which may have been caused

by the unpopularity of his former political party these days. What supports this idea even more is that less than a third of the respondents that stated to have voted for Balkenende in the past, preferred the CDA at this moment, which is his former political party.

The overall conclusion of this study however must be made that no effects that could have been expected from the literature were found. On the basis of the results found in this study it is also very hard to give an answer to the question whether a leader's facial dominance or a leader's voice pitch exerts more influence on the public image of a leader. The findings from this study indicate the limited influence of voice pitch and facial dominance on voting behaviour and perceptions of a leader's dominance, honesty and power. Surprisingly, the voice pitch of Balkenende had an influence on perceptions of honesty that was nearly significant. This finding contradicts earlier research because respondents that listened to the lowered voice pitch perceived Balkenende slightly less honest. Further research therefore has to clarify the influence of a leader's voice pitch on leadership perceptions such as honesty.

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Appendix

Survey 1

In deze enquête wordt uw mening gevraagd over de ex-politicus die zichtbaar is op de onderstaande foto. U kunt elke vraag beantwoorden door steeds 1 van de antwoordmogelijkheden te omcirkelen.



Hoe bekend bent u met deze ex-politicus?

Niet bekend 1 2 3 4 5 6 7 zeer bekend

Hoe dominant was deze ex-politicus volgens u tijdens zijn politieke loopbaan?

niet dominant 1 2 3 4 5 6 7 zeer dominant

Hoe machtig was deze ex-politicus volgens u tijdens zijn politieke loopbaan?

Niet machtig 1 2 3 4 5 6 7 zeer machtig

Hoe eerlijk was deze ex-politicus volgens u tijdens zijn politieke loopbaan ?

eerlijk 1 2 3 4 5 6 7 oneerlijk

Als deze ex-politicus zou besluiten om terug te keren naar de politiek, hoe waarschijnlijk is het dan dat u bij de volgende nationale verkiezingen op hem zou stemmen?

Zeer onwaarschijnlijk 1 2 3 4 5 6 7 zeer waarschijnlijk

Waar plaatst u zichzelf op een politieke links - rechts schaal?

uiterst links 0 1 2 3 4 5 6 7 8 9 10 uiterst rechts

Heeft u in het verleden op deze politicus gestemd?

ja nee

Welke partij heeft uw politieke voorkeur?

PVDA CDA VVD D66 ChristenUnie PVV

GroenLinks SGP 50Plus Partij voor de Dieren SP

Anders:

Wat is uw leeftijd?

Wat is uw geslacht?

M V

Survey 2

In deze enquête wordt uw mening gevraagd over de ex-politicus die zichtbaar is op de onderstaande foto. U kunt elke vraag beantwoorden door steeds 1 van de antwoordmogelijkheden te omcirkelen.



Hoe bekend bent u met deze ex-politicus?

Niet bekend 1 2 3 4 5 6 7 zeer bekend

Hoe dominant was deze ex-politicus volgens u tijdens zijn politieke loopbaan?

niet dominant 1 2 3 4 5 6 7 zeer dominant

Hoe machtig was deze ex-politicus volgens u tijdens zijn politieke loopbaan?

Niet machtig 1 2 3 4 5 6 7 zeer machtig

Hoe eerlijk was deze ex-politicus volgens u tijdens zijn politieke loopbaan ?

eerlijk 1 2 3 4 5 6 7 oneerlijk

Als deze ex-politicus zou besluiten om terug te keren naar de politiek, hoe waarschijnlijk is het dan dat u bij de volgende nationale verkiezingen op hem zou stemmen?

Zeer onwaarschijnlijk 1 2 3 4 5 6 7 zeer waarschijnlijk

Waar plaatst u zichzelf op een politieke links - rechts schaal?

uiterst links 0 1 2 3 4 5 6 7 8 9 10 uiterst rechts

Heeft u in het verleden op deze politicus gestemd?

ja nee

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GroenLinks SGP 50Plus Partij voor de Dieren SP

Anders:

Wat is uw leeftijd?

Wat is uw geslacht?

M V

