Visual Rhetoric or the Rhetoric of Power in Images of World Leaders

(A Model for measuring Social Distance in news portraits of world leaders)

Willem Koetsenruijter

Abstract: The fact that a particular photograph appears in news media, can be seen as the result of collective rhetorical work done by spin doctors, photographers, journalists and editors. The central idea of this paper is that rhetorical means used in these photographs can be explained by the concept of Social Distance. We developed a scale to measure Social Distance in photographs and compared 300 photographs of a political leader from a High Social Power Culture (Gaddafi from Libya) with 300 photographs of a political leader from a low Social Power Culture (Obama from the United States). Results show that the use of rhetorical means such as point of view, facial expression, et cetera, can be explained from a model based on increasing or decreasing Social Distance. The developed scale produced the predicted differences between the two collections of photographs.

Keywords: visual rhetoric, rhetoric of power, rhetorical codes, world leaders, portraits, photographers.

Introduction

The way Gaddafi managed his reputation through photographs in news media was an important factor for his career as the leader of Libya and for his position in the world. In a carefully managed rhetoric of power, he posed, for example, dressed in a gold kaftan on a throne in a nomad tent, with camels in the background, showing that he had his roots in the desert and was closely related to old desert rulers. He was often to be seen wearing sunglasses. He also liked posing in a military uniform, showing he was an army man (one of his names was Colonel Gaddafi). With his female bodyguards who served as décor for his appearance, he also showed that he was a virile man. Did he have a wife or children? If he did, we never saw his family in news media.

Barack Obama has never been photographed in a traditional tepee, or wearing a military uniform, or surrounded by cheerleaders. But he has often been shown in outfits for outdoor activities, such as fishing. Or visiting a local pizza shop, embracing the pizza baker,
or – very often – posing in the company of his wife and children. No photo has ever been seen of Gaddafi embracing a Libyan baker.

For both leaders, the enormous care taken with the composition of their portraits is clearly evident. The layout of the portraits is chosen in such a way as to underline specific ideas about leadership and power. The central idea of this paper is that the rhetorical means used in the photographs can be explained by the concept of Social Distance. A lot of rhetorical work is done by the Obama spin doctors to reduce that distance, whereas for Gaddafi the rhetorical work was focused on increasing the distance. One could say that the ethos of leadership is manipulated by carefully tuning the Social Distance dial.

Rhetorical work

The photographs that actually appear in the media are the result of a process of choice and selection; of collective rhetorical work done by spin doctors, photographers, journalists and editors, based on a combination of what they think power and leadership should look like and what they believe suits their readers or viewers. Thus, these portraits illustrate what a society or a culture regards as an ideal of power and leadership at a particular point in time. This paper is about the way news media shape concepts of leadership with portraits of political leaders. It also aims to see whether we can make the assumptions about high and low social distance measurable.

A constructionist perspective

As this paper focuses on political leadership and political power, it is appropriate to establish briefly how we look at these concepts in this paper. We could point to Max Weber’s typology of power (Weber 1994) or to Machiavelli’s ideas, but this will not serve any useful purpose. The question of what actually constitutes political power or political leadership will, for the purposes of this paper, not lead to a better understanding of the concept, but only to discussions about how power has to be seen from different political angles. This is one reason why we chose a so-called constructionist point of view, by which political leadership and power are not seen as objective entities, but as the result of a process of social interaction that
produces social facts in society. This process and the social facts generate the data to be researched (Spector and Kitsuse 1977).

The media play an important role in this construction process, especially as regards political leaders, since most of us do not know political leaders personally from our own inner circle of friends or acquaintances. By investigating how power is portrayed in photographs, we try to shed light specifically on this construction process and to study the way a society establishes concepts of leadership.

This constructionist perspective is a starting point that fits well in modern rhetoric, while the process of social interaction can be seen as a process by which a public is being convinced of certain views of political leadership. In this respect, it is an extremely relevant perspective for rhetoric: it studies the processes by which viewers or news consumers are persuaded of a specific view of political leadership.

Apart from the fact that there are more and less radical interpretations of this constructionist viewpoint, it provides a clear starting point to study the process by which the media report on social phenomena (see, for example, Berger and Luckmann 1996; Best 1994; Best 1999; Best 2008; Burr 1995; Hacking 1999; Loseke 2007). Spector and Kitsuse (1977) focused on social problems, but later authors applied the starting point to other subjects, such as political leadership (Campus 2010; Chen and Meindl 1991; Fairhurst and Grant 2010; Grint 2005; Hacking 1999). While a traditional perspective on journalism is that news “mirrors” or “reflects” the actual nature of the world (Gans 1979) and journalists are seen as objective reporters of actual events (Chen and Meindl 1991, 523), the constructionist approach to social reality rejects the notion of an objectivity that is independent of social actors. Although Griffey and Jackson (2012) signal a growing acceptance and support by scholars of the socially constructed nature of leadership, it is indeed typically a starting point for scholars in journalism studies and not for the daily working practice of journalists themselves.

The answer to the question of what we see as leadership or as political leaders, is from this point of view and for the sake of this paper therefore relatively simple: it is what is presented as such in the media. Or in a more dedicated way: “Leadership is co-constructed, a product of socio-historical and collective meaning-making and negotiated on an ongoing basis through a complex interplay among leadership actors, be they designated or emergent leaders,
managers and/or followers.” (Fairhurst and Grant 2010, 172). To fill in the concept, we use two theoretical notions: **Social Distance** and **Power Distance**. The first is used to explain why certain rhetorical means are used to portray leaders and why they convince us of their leadership. The second notion is used to map differences in the view of leadership and leaders across different cultures.

**Social Distance**

The concept of Social Distance was coined by Simmel (1908) at the beginning of the 20th century and was further developed by Bogardus (1926). Within this view, specific forms of society are defined in terms of distancing processes (Bichi 2008, 487).

Social distance is not locational or physical distance; rather, it describes the distance between different groups in society. The notion includes all differences, such as social class, race, ethnicity or sexuality, and also the fact that different groups do not mix. Cesareo (2007, 11) defines Social Distance as (translated from Italian in Bichi 2008): “the lack of availability and relational openness – of variable intensity – of a subject in regard to others perceived and acknowledged as different on the basis of their inclusion in a social category. It is the result of the dynamic interaction of factors situated on three different dimensions of space, themselves in a reciprocal co-production: physical, symbolic and geometrical.” The concept is related to – but broader and more theoretical than – psychological distance. See, for example, Grabe and Bucy (2009, 153): “By minimizing the psychological distance between viewing audiences and actors on the political stage, television prompts viewers to regard candidates in personal terms, fostering familiarity and trust.”.

In this paper, “regarding candidates in personal terms” is seen as a rhetorical means by which the Social Distance between the candidate and the audience is reduced. Social Distance is used as a model to explain why only certain means are used. It shows that reducing or extending Social Distance can function as an explanation for the use of all kinds of means in the photographic portraits of political leaders.

Bichi (2008, p. 493) distinguishes three dimensions of the Social Distance concept: Perceived Social Distance, recognized as such by the person who experiences it; Expressed Social Distance, intentionally put into practice as an action of distancing oneself; and
Undergone Social Distance, the result of the distancing action. In this paper we use Social Distance as Perceived Social Distance: that which is – or is expected to be - experienced or seen by viewers or media users.

Camera framing or shot size, for example, can be seen as a means to portray leaders in a certain way, and influences Perceived Social Distance: framing the leader full screen and close up reduces the Social Distance, while a wide angle increases the Social Distance. Showing the leader in a comfortable setting with his wife and children reduces Social Distance; portraying him standing in front of an army division increases Social Distance. The concept is broad enough to cover all kinds of means, and narrow enough to be made measurable.

An illuminating remark on the difference between psychological distance and Social Distance comes from Lammers and others (2012, 282): “Psychological distance refers to the degree to which events are directly experienced. If people experience distance toward an object, they are less involved with that object.” (Liberman, Sagristano and Trope 2002; Trope and Liberman 2000; Trope and Liberman 2003). For example, psychological distance can be experienced due to increased time between an event and the present (temporal distance), when an event is perceived to be more hypothetical, or when a person is seen as less close to the self. The latter form of psychological distance – distance toward people – is called Social Distance. (Liberman, Trope and Stephan 2007).

The notions of the *perceived distance to the self* and *distance toward people* are important elements in the way the concept of Social Distance is used in this paper. It is associated with affective Social Distance, that is how much or little sympathy the members of a group feel for another group, as well as with normative Social Distance, based on norms about who should be considered as an “insider” and “outsider.” Or to put it briefly, it answers the question: is he or she *one of us*?

In the first half of the twentieth century, Bogardus developed a scale to measure Social Distance (Bogardus 1928). With this scale, Social Distance is defined as people's willingness to participate in social contacts of varying degrees of closeness with members of diverse social groups, such as racial and ethnic groups. This compound scale asks people the extent to which they would accept members of different groups in different circumstances, for example
as close relatives by marriage, as close personal friends, neighbours or visitors in their country.
The Bogardus Social Distance scale is a cumulative scale; a so-called Guttman scale (Guttman 1944). This means that agreement with any item implies agreement with all preceding items. Bogardus’s conceptualization is not the only one; sociologists have pointed out that Social Distance can also be conceptualized on the basis of other parameters such as the frequency of interaction between different groups or the normative distinctions in a society about who should be considered an “insider” or “outsider.” It is meant and used to score groups of people from different races and ethnicity. The scale is not per se designed or suitable to score photographs of leaders. (A pre-test with 30 Dutch students on a collection of random portraits showed too low a reliability for the scale.)

A scale to measure Social Distance in photographs

Based on literature, we developed a compound scale to measure the perceived distance realized between the image depicted and the viewer in photographic portraits of political leaders. The six variables we used were: Nature of Candidate, Point of View, Facial Expression, Image Act, Interaction and Physical Distance. The scale is an adapted version of that used by Lee et.al (2004). We underpinned the combined variables by different publications on semiotics, photographic portraits and campaign photographs. Each of these will be further explained. We made an essential adaptation to the scale in that we ranked the values of each variable on a continuum from low to high Perceived Social Distance.

Nature of Candidate

The notion of Nature of Candidate is derived from an article by Glassman and Kenney (1994). They introduce seven roles in which political leaders are visible in campaign photographs: beloved leader, dynamic speaker, media star, the glad-to-see-you-type, the outdoorsman, the father figure and the family man. Glassman and Kenney see these types as mythical types, as roles. After a pre-test to find out whether it is possible to score these types with enough reliability, we added two categories and renamed others. We ordered the nine categories intuitively on the degree of the perceived Social Distance. From low to high:
Family type; Outdoorsman; Father-mother type; Glad to see you; Relaxed leader; Dynamic Speaker; Media star; Stressed leader and Promised leader.

**Point of view**

Point of view is an often used variable in semiotics. It is almost common knowledge that a high camera standpoint makes a subject look small and insignificant and a low angle makes it look imposing and awesome. (Kress and Van Leeuwen 2006, 146). In relation to power, they state: “...if a represented participant is seen from a high angle, then the relation between the interactive participants (the producers of the image and hence also the viewer) and the represented participant is depicted as one in which the interactive participant has power over the represented participant – the represented participant is seen from a point of view of power. If the represented participant is seen from a low angle, then the relation between the interactive and represented participants is depicted as one in which the represented participant has power over the interactive participant. If, finally, the picture is at eye level, then the point of view is one of equality and there is no power difference involved.” (Kress and Van Leeuwen 2006, 146). In terms of Social Distance, we see a low angle as a rhetorical means that enlarges the Social Distance to the individual depicted while a high angle reduces it.

**Facial expression**

The third variable we used to measure the Perceived Social Distance realized between the person depicted and the viewer, is facial expression. Based on a qualitative content analysis of the collected material, we ordered five values of facial expressions from low to high Social Distance: smile, frown/sad, no expression, determined, and sunglasses. In a pre-test we were able to score these values with enough reliability (see method). We added the last value (sunglasses) because of the fact that Gaddafi is pictured quite often with large, dark sunglasses. Sunglasses prevent one from seeing any expression in the eyes and therefore causes a greater Social Distance (Roberson a.o. 2012).
Image act

The variable image act is derived from Kress and Van Leeuwen (2006), and is based on the work of Van Leeuwen and Jewitt (2001) and Goffman (1979). Van Leeuwen and Jewitt distinguish two different relations between the viewer and the subject of the photograph, that they refer to as the ‘image act’. The person in the picture can make offers or demands: “There is (…) a fundamental difference between pictures in which the participants represented look the viewer directly in the eye, and pictures in which this is not the case. When the participants represented look at the viewer, vectors, formed by participants’ eye lines, connect the participant with the viewer. Contact is established, even if it is only at an imaginary level.” (Van Leeuwen and Jewitt 2001, 30). Goffman (1979) has analyzed the way in which bodies are represented in advertisements, distinguishing several bodily poses, which he analyses in terms of power: certain acts signify powerlessness, others place the viewer in a place of superiority. Combining the acts of Kress and Van Leeuwen’s semiotics and Goffman’s observations, Van Leeuwen and Jewitt distinguish five values for the variable image act.

Ordered from low to high Social Distance, these values are: offer/ideal, where the model offers himself as an idealized exemplar of a class or attribute, looking away from the viewer. Demand/affiliation, where the model looks directly at the viewer, smiling. Demand/submission, where the model looks down at the viewer, not smiling. Demand/seduction, where the model looks up at the viewer, head tilted, smiling or ‘pouting’. And a final category, ‘other’ (Van Leeuwen and Jewitt 2001, 31).

Interaction

Portraits of leaders are not always ‘single’ portraits: not infrequently, other people are depicted in the proximity of the leader, such as family members, campaign assistants, officials, a roaring crowd, et cetera. The way an individual is connected to other persons in a portrait can influence the way we experience the Social Distance to the depicted. Or, to use Davison’s words: “Group portraiture is a deliberate construction of the significance of an individual’s relations with others …” (Davison 2010). We used an adapted version of the categories used
by Lee et al. (2004, 127) in five values from low to high Social Distance: with family, with a couple of people, alone, in a roaring crowd, in an uninterested crowd, with officials.

**Physical Distance**

The variable of Physical Distance is derived from the work on proxemics by Edward Hall and Jewitt and Oyama (2001). Jewitt and Oyama state: “Images can bring people (…) close to the viewer. Or keep them at arm’s length. In everyday interaction the norms of social relations determine the distance we keep from each other. This translates into the ‘size of frame’ of shots. To see people close up is to see them in the way we would normally only see people with whom we are more or less intimately acquainted” (p146). Close ups in photographs have arisen since the technical development of fast film and telephotography. And only since the seventies of the previous century have photojournalists been able to zoom in on the president and depict images that show him in intimate, clear close-up shots. Mullen (1998, 4) calls this variable *proximal dimension*, and defines it as the perceived closeness of the subject photographed. Referring to Hall’s work on proximity, he says: “The perception of people’s Social Distance through photographs affects the understanding of those individuals as it creates a sense of intimacy or distance and contributes to emotional factors such as self-disclosure: Close-ups give us a more detailed look at our leaders than we have of most of our friends (…) such close-up faces are intimate and self-revelatory. The scrutiny possible at such range is intense. It is the technical development of photography and lenses that makes close ups more salient in modern press than fifty years ago.”

The physical distance pictured on the photograph and realized by the size of the frame has an effect on the way we perceive the person pictured and on the figurative or metaphorical distance we feel. The closer we approach one another, the more we become entangled with one another socially, psychosocially and perhaps physically (Koga-Browes 2010, 9).

For our purposes, we distinguish six values in physical distance, based on Hall, from small Social Distance to large: Intimate; Close personal; Far personal; Close social; Far social and Public. Close personal is what one would call a close up; public is a portrait from head to toe.
Composing a compound scale

To translate these six variables to a measurable compound scale, we attached a number to each value of the variable, by dividing 1 by the number of possible values per variable. So, for example, for the variable point of view, there were three possible values: camera equals point of view, camera higher than point of view and camera lower than point of view. This gives three possible values: 0.33; 0.66 and 0.99. For the Physical distance variable there were five values (Close personal; Far personal; Close social; Far social and Public), so each value was given numbers ascending in steps of 0.20 from 0.20 to 0.40, 0.60, 0.80 to 1. By simply adding the six values and dividing them by six, we acquired an unweighted, rough measure for the perceived Social Distance in photographs.

Power Distance

Using the scale described above, we will be able to measure the perceived Social Distance in a portrait of a political leader. To validate the scale it would be interesting to see whether we could measure differences between political leaders from different countries and different cultures. It could be expected that differences in the way people regard power and leadership could be measured with the Social Distance scale, and that the use of rhetorical means could be explained from a model based on increasing or decreasing Social Distance.

Hofstede

We, therefore, needed an independent measure to score cultures in different types of power or kinds of leadership. And this is, in fact, what the Dutch sociologist Hofstede did when he characterized countries in terms of cultural dimensions (Hofstede 1984; Hofstede 2010). Initially he proposed four dimensions along which cultural values could be analyzed: individualism-collectivism; uncertainty avoidance; Power Distance (strength of social hierarchy) and masculinity-femininity (task-orientation versus person-orientation). He later added a further two dimensions: the extent to which people are focused on long-term orientation and the variable of indulgence versus self-restraint. For the purposes of this paper, we were especially interested in the dimension of Power Distance. Power Distance is primarily a notion that reflects how a society deals with inequality. Hofstede defines Power
Distance as follows: “The degree of inequality is measured by the Power Distance scale (…). In organizations, the level of Power Distance is related to the degree of centralization of authority and the degree of autocratic leadership. Features such as centralization and autocratic leadership are rooted in the mental programming of the members of a society, not only of those in power but also of those at the lowest end of the power hierarchy. Societies in which power is distributed unequally remain so because this situation satisfies the psychological need for the dependence of the people without power. Societies and even corporations will be led as autocratically as their members will permit. The autocracy is just as much in the members as in the leaders: their value systems usually represent one integrated whole” (Hofstede 1983, 44).

On the World Map of Power Distance Index website, one can see which countries score high and low on the Power Distance Index (PDI). Examples of cultures with high PDI scores include Arabic-speaking countries, Russia, India and China. Those with low scores include Japan, Australia and Canada. The Power Distance Index of Libya is 0.80; the index for the United States is 0.40.

From these ideas we extracted three hypotheses.

H1. The use of rhetorical means can be explained from a model based on increasing or decreasing Social Distance.

H2. Social Distance is closely connected to Power Distance.

H3. Measured Perceived Social Distance in photographs of leaders from High Social Power Countries is higher than Measured Perceived Social Distance in photographs of leaders in Low Social Power Countries.

Data corpus

For this project we used 600 portraits obtained from a straightforward search on Google images with the names of two leaders Barak Obama and Gaddafi as key words. We included all the portraits that appeared at a certain moment until we had 300 different portraits of Obama and 300 different portraits of Gaddafi. Portraits were counted as portraits if the main topic was the depicted leader Gaddafi or Obama. A cropped version of a photograph did
not count as a photograph on its own; in that case, we took the biggest version of the photograph in our collection and deleted the smaller one. Portraits were counted as portraits if the main topic was the individual depicted.

Is such a sample a good sample? For the purposes of this paper, it is. It is important to know that Google Images does its search work not by means of man-made tags, but on verbal data collected from the context of each picture. This generates portraits from a lot of different sources and – more importantly – it generates a lot of different portraits, because Google filters out the doubles. Therefore this sample from Google Images can be seen as a collection that depicts what in rough terms defines our public discourse; it is the result of the collective rhetorical work done by spin doctors, photographers, journalists and editors, based on a combination of what they think power and leadership in the case of these two world leaders should look like, and based on what they think suits their readers or viewers.

The fact that Google filters out the doubles is not a problem for our purposes: it does the same for Obama as for Gaddafi. There is, however, a disadvantage, namely that we cannot see all the photos used, so we cannot make statements about how often a particular photograph is used. But the advantage is that we can see a maximum of variety in the photographs.

A second caveat is that this kind of result could be colored by language. The search for “dog” gives you, for example, other dogs than the Danish search for “hund” (which by the way also includes German dogs). For this particular search, this was not important: Obama’s name is spelled the same in a lot of countries and smart algorithms search for different spellings of the name of Gaddafi.

Another question is whether it matters where those 600 pictures come from. For the purposes of this study, it does not. We are not focusing on differences in media in different countries, or differences in the way American or Libyan photographers do their job. (Although it would be an interesting addition for the future; see the discussion paragraph.) In fact, we are trying to reconstruct the image of these two world leaders in our media. It is therefore enough to know that they come from Google Images and that they are the top 600 pictures used on the web. This collection is a good part of what constitutes our view on how a certain kind of leader should look. Should look, because we are talking about a construction
by photographs and not about how he ‘really’ or ‘essentially’ looks. And this is precisely what this paper is about: that is, it is not about what power actually is, but about how it shows up in our media. Google images can be seen as a collective memory which shows our concepts and at the same time forms our concepts.

Results
We scored all 600 photographs on the six variables and asked a second coder to score another sample of 50 photographs. (This produced for every separate variable an inter-coder reliability on Krippendorff’s alpha of > 0.8.) Treated as a compound scale, the six variables together result in a Cronbach’s alpha of 0.61, which is not high, but is sufficient to qualify as a more or less homogeneous construct.

Table 1: Mean values of the differences between the pictures of Obama (n =300) and pictures of Gaddafi (n =300) on the six separate variables. * = sig, t = <.01.

<table>
<thead>
<tr>
<th>Variable:</th>
<th>difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature of candidate</td>
<td>2.9*</td>
</tr>
<tr>
<td>Point of view</td>
<td>0.3*</td>
</tr>
<tr>
<td>Facial expression</td>
<td>1.4*</td>
</tr>
<tr>
<td>Image act</td>
<td>1.6*</td>
</tr>
<tr>
<td>Interaction</td>
<td>0.7*</td>
</tr>
<tr>
<td>Physical distance</td>
<td>0.6*</td>
</tr>
</tbody>
</table>

On the compound scale – where the six variables were added up, with a maximum score of 6 – the perceived Social Distance for the pictures of Obama was 2.5; that of the pictures of Gaddafi 3.7. This represents a significant difference (t = 24.7 / p = < .001; r = .86).

Social distance, as measured with this scale, can be seen as an explanation model for the differences between the pictures. The use of rhetorical means such as point of view, facial
expression, et cetera, can be explained from a model based on increasing or decreasing Social Distance. All measured differences between the collection of photos of Obama and of Gaddafi were significant and pointed in the same direction. This also confirms that the measured Social Distance is closely connected to Hofstede’s Power Distance. So we can conclude that a difference in Social Distance can be perceived in photographs from leaders originating from a High Power Distance Country and those from a Low Power Distance Country. This difference can be explained by variables that work as moderators for Social Distance: the switches to tune Social Distance to a required value. Hofstede’s measurement for Power Distance predicts this value.

**Discussion**

This research project makes clear that theoretically studied variables, such as point of view, facial expression, et cetera, can in practice constitute a measure for the Social Distance of different images of leadership. Social distance seems to function as an explanation model for the diverse rhetorical means. Each variable can be explained by the enlargement or diminishment of Social Distance. We learnt that in portraits of a western leader like Obama more means are used to diminish the Social Distance to the viewer or the voter. In portraits of Gaddafi these means are used to establish a large Social Distance to his nationals and the viewers. This correlates with the findings of Hofstede who characterized Libya as a country with a high Power Distance (0.80) and the United States as a state with a low Power Distance (0.40).

The research shows that Social Distance can be measured, and that it is closely related to Hofstede’s concept of Power Distance. It also shows that the leaders of the two countries represent and establish two different kinds of leadership and that these two kinds of leadership are visible in news portraits of the two leaders as distributed on the internet. The research makes us aware of the fact that our image of leadership is carefully constructed and is in this way an illustration of how media shape our reality.
A not unimportant point of discussion in the first place is that we used only photographs and did not consider the context or the captions of the photographs. We did so because we were primarily interested in the way photographs did their rhetorical work. But, for future research it is certainly more valid to study these photographs in their journalistic context.

Another point of discussion is that we did not differentiate between pictures from Arab photographers and western photographers. There was a practical reason for this: we obtained the photographs from a Google search sample and many pictures on the internet do not mention the makers and it would require another research to track down all the makers and figure out where they came from. It will certainly be a good idea to focus another research project on the question of whether photographers from high Power Distance countries score differently on the scale from news photographers from low Power Distance countries.

A third point of discussion is the use of the straightforward search on Google images. It is convenient and fast, and it is almost certainly a representative collection of some kind, but we are not sure how representative. Future research should shed more light on the question of how valid the use of these kinds of samples is. We are preparing research where we compare samples from Getty Images, the major press agencies and Google images.

A final point of discussion is the fact that we only looked at photographs and left television footage aside. It certainly is a good idea to develop further research on moving visuals and investigate how these relate to pictures.

**Bibliography**


Substantial parts of the research were done by Marloes Vinke for the work on her master’s thesis. See Vinke, 2012.