Seeing Beyond Words

*Animals teach us about our natural ability to lead*
ABSTRACT

Nonverbal communication in leadership is a phenomenon which is interesting to get a greater understanding of. Animals only communicate nonverbally and have strong leadership behaviours. Therefore, this study aim is to find out in what way nonverbal communication in leaders is still connected to animal roots and what the implications for modern life are. This study tries to give an overview of the phenomenon with a theoretical approach. Different point of views of nonverbal communication and animal behaviour in leaders have been discussed. A theoretical approach was suitable because of the abundance of literature in the main fields of focus. Connecting the different studies with each other gave valuable insights into the phenomenon. Power, status, submission, territory, space, and mating behaviours are the most used categories associated with leadership behaviours in animal species. Human leadership behaviour consists of the same categories but furthermore, emotional intelligence is an integral part as well. Different postures, gestures, facial expressions as well as distances to each other gave a comprehensive overview of how leaders are naturally behaving. Deciphering the complex nonverbal communication and looking at them with aspects of communication in animals helped with showing the roots and the natural ability to lead. Further research however should be conducted to see how nonverbal communication influences complex group dynamics and the effect thereof. Implications for the natural instincts to lead are helpful with how leaders can further their communication skills and become more conscious of their nonverbal communication.

KEYWORDS

Nonverbal communication, Leadership behaviour, Predator, Prey, Primates, Proxemics, Power, Status, Mating Behaviour, Emotional Intelligence, Gestures, Position, Postures
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1 INTRODUCTION

Nonverbal communication is something that fascinates many people. We can see this in different TV shows such as *Lie to me* and *The Mentalist*, different books like *People Watching* by Desmond Morris as well as professionals giving workshops and personal coaching’s in nonverbal communication to be more effective in the workplace. But what are the reasons we are so fascinated with understanding each other without any verbal attributes?

1.1 Earlier research on nonverbal communication

As early as the 1950’s until now research concerning the topic of nonverbal communication has been done. Particularly in the 50’s until 70’s several different people studied the phenomenon from different point of views such as universal vs. cultural learned behaviours (Ekman and Friesen 1969, Morris 2002, Birdwhistell 1971). Communication with just our bodies has such a significant impact in our daily interactions and fascinated many people. Not only psychologists and social scientists, but also anthropologists and zoologists as well as ethologists conducted research. They looked at the different dimensions of nonverbal communication in animals and humans. The main research topics within this field evolved over time and Knapp and Hall (2006, p.21) described that research in the beginning was more focused on either biological or cultural aspects. It soon evolved to a more holistic view where both biological and cultural aspects affected the field. Together with the involvement of studying interactions rather than just individuals changed the outcomes of many studies.

Nowadays, there are few recent studies of nonverbal communication in general. The research of nonverbal communication has continued but got more specific such as how nonverbal communication influences a patient – doctor (e.g. Brugel, Postma-Nilsenova & Tates 2015, Hannawa 2011) or a teacher – student (e.g. Houser & Waldbuesser 2017, Wei & Wang 2010) relationship. Within the more recent studies I found a lack of studies about leadership and nonverbal communication. There are a lot of leadership books for example of Atwater and Waldman (2008) as well as Eikenberry and Harris (2011) that have a chapter on communication and nonverbal communication but the extend of these chapters is short and not much information is given. On the other hand, Goman (2011), Reiman (2007) and Pease and Pease (2004) wrote books about leadership behaviour and especially nonverbal communication for people to improve their capabilities on nonverbal communication not only in decoding it but also becoming better at giving the right signals. All these books, however, do not give an insight
in why we behave as we do in leadership positions. Where do all these different gestures and expressions come from?

1.2 Why linking nonverbal communication, leadership, and animals?
We must look at the evolution of behaviour to understand the essence of nonverbal communication and the developing of behaviour. Lorenz (1958) wrote about behaviour being either innate or learned. The former can be described as ‘motor patterns’ (p.67) which are hereditary and are equally important as the learned once. Whereas the learned behaviours are influenced by the environment, upbringing, and experiences. The terms nature and nurture best describe this distinction of behaviour.

How nature and nurture affect us, has also to do with where we belong in the animal kingdom. Diamond (1993) elaborates that we are categorised as mammals and under this section as primates. Therefore, we have many traits in common with apes and monkeys which are not seen in other mammals.

A good example as described by Lorenz (1958) is the scratching behaviour of dogs and birds such as the finch. Imagine the dog putting its weight on one hind leg and his two front legs using his free hind leg to scratch its neck while reaching over the shoulder. Looking at the finch, it does the same. While doing so the wing which is normally in resting position on the side of the body gets taken off the body to reach with the foot over the shoulder to scratch the neck. For the bird this is quite a weird approach of scratching its neck, but this also shows how behaviour can be genetically innate. (Lorenz 1958, pp. 67+68)

Darwin (1897, p.43) described another example for innate behaviour. When for instance a dog sees another dog and on instinct moves its head down and crouches, this is a remnant behaviour from hunting prey. Usually dogs show this sort of behaviour when seeing prey and wanting to hide themselves before an attack. They make themselves smaller with this behaviour pattern.

A nature example would be how wolf pups learn to hunt from their parents. The drive to chase is instinctual but the parents as well as play teach how to hunt successfully. Play is the most important aspect of any young to learn how to interact socially with others and learn vital skills for surviving. (Mech & Boitani 2003)

Humans have innate behavioural patterns and learned ones as well. In his book *The Naked Ape* (2005) Desmond Morris shows how behaviour of humans is rooted in our biology and which is considered universal to all humans. These behaviours are still from our animal past and have
changed throughout evolution to suite our modern lives better. Because these behaviours are rooted in our animal past it is interesting to look at what we still have in common with different species and what we can learn from our history in addition to the evolution of the animals’ behaviours. Looking at how the humans evolved Morris went back to the evolution of apes living in the jungle and foraging on fruit in the trees. These apes lived in a social hierarchy without a home base moving around just for feeding purposes.

The environment must have changed and gave the apes a reason to change their behaviour, move to more open land and go to the ground. On the ground however, a lot of other animals already adapted to living either as a predator or as a prey animal making the best use of their surroundings. The apes had to modify to either one of the existing methods or change it entirely. Slowly the apes evolved into hunting apes using their unfamiliar environment most efficiently. In becoming a resourceful hunter, the apes adjusted their hunting to pack hunting like wolves do. This ensured them more success. With this change the strong hierarchy became more collaborative to work together and be successful in hunting. Through time the brain of the apes grew bigger and more efficient than of other species and the posture changed as well making the hands free to use tools – the first human was born. (Morris 2005)

The humans also changed their way of living and had now a home base where they returned to after a successful hunt. This meant just like in predators they had a territory to protect and defend, unlike their ape ancestors. While becoming more cooperative the human had also to further their communication skills. Nonverbal behaviours were the first step in communication, the verbal communication was later formed (Buck and Van Lear 2002). Humans are always looking for nonverbal cues because it is engrained in their genetics through the evolutionary process (Goman 2011). (Morris 2005)

What is nonverbal communication precisely? Knapp and Hall (2006) define nonverbal communication as ‘communication effected by means other than words, assuming words are the verbal element’ (p.5). Mehrabian (2007) added the actual behaviours and stated that

‘nonverbal behaviour refers to actions as distinct from speech. It thus includes facial expressions, hand and arm gestures, postures, positions, and various movements of the body and or legs and feet.’ (p.1)

Later, Mehrabian (1981) wrote that nonverbal communication occupies 93% of a conversation consisting of tone of the voice, body language and facial expressions.
To define the words clearly, I will make use of the word *nonverbal communication* when referring to the whole spectrum of communication skills which are used nonverbally. *Nonverbal behaviour, nonverbal cues* and *nonverbal signals* will be used interchangeably for the specific behaviours such as a gesture which is used as a message during a nonverbal communication process. To clarify, several nonverbal behaviours create a message which is used in nonverbal communication.

As seen in the evolution of behaviour there are two ways a behaviour is formed either through nature or nurture. Cultural aspects such as upbringing, rituals and traditions are forming a crucial part in how nonverbal communication is expressed by an individual and is an example of learned behaviours. Furthermore, nonverbal behaviour dependent on culture can differ immensely between cultures and can lead to misunderstandings when communicating with a different one. It also creates variation how people perceive certain nonverbal cues. One gesture can have a different meaning in diverse cultures (Ekman 1977). (Morris 2005)

According to Ekman (1977) biological and cultural factors have different influences on nonverbal communication and thus it must be taken into consideration which behaviour is studied and how it has evolved throughout time. It is a complex phenomenon where both, biological and cultural aspects, have a profound influence on nonverbal communication.

Therefore, it is good to look at the three primary roots of nonverbal communication as described by Ekman and Friesen (1969). Firstly, being innate of the nervous system. Secondly, behaviour that is attained through the existence of the species and is present in all members (such as using the hand to put food in the mouth). Lastly, behaviour that is learned through culture, upbringing or individuals. Knapp and Hall (2006, p.32) add that there is an overlap in biological and cultural nonverbal communication. Furthermore, the environment can impact nonverbal behaviours with factors of biology such as climate. Moreover, Byers (1997) wrote that nonverbal communication changes depending on the situation. The different cues can give a great meaning to what is said. Nonverbal signals can therefore strengthen or weaken a message to a big extent.

Now knowing how evolution through either nature or nurture influence nonverbal behaviours, it is time to have a look at the leadership aspect of this study. Atwater and Waldman (2008) wrote about the importance of nonverbal communication in leadership. How gestures, facial expressions and other body language influence the followers. Diving deeper into this topic and trying to explain why leaders behave like they do is one important aspect for this study.
Furthermore, they talk about the communication gap which occurs when followers and leaders do not understand each other’s communication.

In a recent study about *Nonverbal behaviour and communication in the workplace*, Bonaccio et al. (2016, p. 1066) mentioned that studying ‘nonverbal behaviour and communication will allow us to develop evidence-based tools to better equip managers to address a host of workplace challenges’ together with ‘enhancing leadership nonverbal behaviours and communications across cultures.’ This shows that understanding nonverbal behaviours better is still a recent phenomenon and especially when going into the field of leadership behaviour. Furthermore, according to Darics (2017) there have not been enough studies on how nonverbal cues effect the enactment of leadership.

To narrow this broad field of nonverbal communication down, this study focuses on leadership behaviour and how nature and nurture affect nonverbal communication. While cultural aspects are studied widely within the field of anthropology and intercultural communication, the innate behaviour is left out of these studies. To illustrate nonverbal communication in leadership positions, animal leadership behaviour will be used, because of the shared history of human and animals and how innate behaviour is formed. Therefore, the leadership behaviours that the study is focusing on is dominance, fighting, mating (Morris 2005, Searcy & Nowicki 2005), in addition to territory and space (Hall 1968, Morris 1994). These behaviours are the sources of leadership behaviours today and will be described in depths during this study.

The animals used for the study are social animals which live in groups rather than animals that live in solitary and only meet for mating purposes. It is more likely to find leadership behaviour in animals that live together because of the interactions within the group. Hence, the social behaviour of the animals is important for leadership behaviour to be present. Furthermore, humans also live together in a social society associated with how certain animals live. This study explores leadership behaviours of wolves, chimpanzees and horses.

Why looking at these particular animals? As mentioned earlier the biological roots of humans are within the primates. Therefore, it is interesting to choose the chimpanzee as the closest related species to us and discover how they behave in leadership positions. Chimpanzees are social animals living in groups with a strong hierarchy (Peirera & Altmann 1958). The wolf is a predator that lives in packs which also resembles our social constructions and the predator nature of hunting which is similarly related to the humans’ evolution (Morris 2005).
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The last animal, the horse, is a prey animal, which is usually hunted by a predator, but we as humans have domesticated this animal and use it for work, food and as a companion animal (Morris 1994, Podberscek, Paul & Serpell 2000, Jensen 2009). Horses live also just like humans in family bands and interact with other bands within their herd (Dierendonck 2006). Horses are also often used for therapy or coaching and have the capability to mirror behaviour which helps the participants in understanding their own behaviour patterns (Stempel, 2011). Furthermore, the horse has a special meaning for me as having a prominent role in my life. I studied their behaviour intensively before which will help me in drawing the needed parallels to the human leadership behaviour. Also, choosing an animal that is not as closely related to our evolution as the other two might give us more insight in what we can learn from animal leadership behaviour.

1.3 Research question
This study aims at finding the roots of nonverbal communication as well as comprehending the cues in it better ‘to understand the thoughts, feelings and interactions of others’ (Riggio & Feldman 2009, p. 215), especially in a leadership position. Clear nonverbal communication gives us the possibility to read our counterpart better as well as being able to improve our understanding of each other. Creating awareness about nonverbal communication is one of the factors for doing this study because communication is one of the most important but at the same time difficult skill sets to have. Most people are unaware of their own communication style, especially their own nonverbal signals. With understanding this unconscious behaviour better leaders and their followers can become improved communicators because of being able to read and to use their own nonverbal communication more consciously. Every interaction between two people consists of some nonverbal communication. This can help in the daily interactions in the workplace, making communication more direct and easier to use.

All these factors arise the research question: In what way is nonverbal communication in leaders still connected to the animal roots and what are the consequences of this behaviour in modern life?

This study focuses mainly on the first part of the research question giving an in depth understanding of the connection of nonverbal communication with animals. The second half is discussed in the end of the study and only gives a short overview of possible implications. However, it is merely scratching the consequences and can certainly be further developed.
1.4 Added value

The essential outcome of this research therefore, is to find where certain nonverbal signals come from. Are they rudimental behaviours that can be seen in the animal kingdom and in humans or are these socially learned and evolved in society? Overall, I like to know what nonverbal communication means to leadership and to show the importance of it in daily life. The contribution to the field of leadership research lies within the understanding and creating awareness on how certain nonverbal behaviours are formed. Management tools on communication among coaching and mentoring can use this knowledge. Giving an illustration with animals can have a positive impact on people, because of the strong bond animals and humans have today. It may be easier to understand the complex phenomenon of nonverbal communication and how this influences our daily lives. Furthermore, I like to inspire others to have a look at their own nonverbal communication and become more aware of it as well as to pay attention to the nonverbal communication of others.

1.5 Outline of the thesis

After having introduced the concept of nature and nurture in addition to how behaviours are formed through different influences in ones’ life leading to the research question, chapter two will continue with the methodology. The research strategy, design and methods as well as limitations can be found there.

Chapters three and four explore the various levels of nonverbal communication, leadership behaviours in the chimpanzee, wolf, horse and human. The essential leadership behaviours are defined, discussed and prepare the reader for the data analysis of nonverbal behaviours of the wolf, horse, chimpanzee and human in chapters five through seven.

Chapter five gives an in depth understanding of nonverbal cues which are commonly found in power and submissive displays. Chapter six goes deeper in territory and proxemics within leadership behaviour. Mating and sexual attractiveness cues can be found in chapter seven in detail.

Chapter eight will go beyond the animals and show how humans have unique features which help with leadership nonverbal communication. Thereafter, the closing remarks (chapter nine) will draw conclusions on similarities and differences in the behaviour of human and animals in leadership positions. As well as giving indications about how this study can help with one’s own nonverbal communication and further research topics.
When starting this thesis, I was looking at different possibilities to structure the study and dive into the topic within the field of social sciences. In fact, it would be a social research which draws inspiration from different phenomena in animal and human behaviour.

But why conducting a social study in the first place? The topic that I am interested in is nonverbal communication and not only in humans but in animals as well. I have always been fascinated how animals communicate with each other with the subtest movements and knew that we as humans are capable of the same. Nonverbal communication occurs mostly on the unconscious level. Making others and myself more aware of the nonverbal communication cues we are using and therefore, helping understand situations better was my first starting point for the study.

With the realisation that I can learn something from the animal nonverbal communication literature, I could combine two of my interests. Some questions arose: Which similarities might we have in nonverbal communication? Where does our cues and signals come from and can we learn something from animals and their communication process? Furthermore, while being in the programme of leadership and management I got increasingly interested if there is a difference in leadership behaviour and how a leader can benefit of more awareness of nonverbal communication. The awareness comes when knowing where the roots lay of these behaviours which coincides with the aim of the study. To illustrate the scope of the study better, figure 1 shows the three topics of the study. The overlap showed by the three circles is where this study will focus on. This also indicates the theoretical framework for this study which will further the
Methodology

literature review and findings. This theoretical framework of how the three topics are linked, will serve as a guideline throughout the study to show the connection of the different theoretical parts (Grant & Osanloo 2015).

I want to be able to see for myself and help others to see the nonverbal cues and interpreting these in the right way. I use the term see also in the title of the study because it is not just looking at a topic that makes us understand what we are observing, rather it is seeing that is important. Seeing is more than looking, it is the process of understanding and giving a meaning to it as well. It enhances the awareness of the whole phenomenon.

Seeing where the behaviours come from and what animals and humans might have in common or distinguishes them from each other can help with the understanding process. The knowledge that is gained with this study enables the reader to see nonverbal leadership behaviour more thoroughly.

It is also important to note that there are a few things according to Bryman (2016) that can have an influence on the outcome of the study. The researcher itself has an impact on the study with the previously attained knowledge and how he or she will interpret the findings. Furthermore, the process can be influenced by the expectations made up by the nature of the phenomenon which is studied as well as ethical implications on the study. My background of the study animal management with a focus on horses can have an impact on the interpretation of the animal literature. During my earlier study I learned how to analyse and interpret behaviour studies critically. Working with horses in my free time and learning to understand the body language of them can have an influence as well. The expectations of the phenomenon is to find a link, whether this is the case has to be looked at critically. There is plenty of room for interpretations when linking animal and human behaviour patterns.

All these different topics together form the basis of this study which are further explored with the help of the research strategy, design and methods. First, I will describe the general research strategy of this thesis, after which I will go more into detail with focus on the research design and the methods used as well as the limitations.

2.1 Research strategy

The research strategy of this thesis is rather traditional and can be seen in the structure of the study. A theoretical approach to the topic was chosen. Within the theoretical study different steps were taken to go deeper and deeper into the different topics. To illustrate how the study
was conducted, I mapped the structure of the study. The resulting strategy and structure can be seen in figure 2. Hart (1998) mentioned that a literature review will give insight into the significant aspects of the topic in addition to attain different perspectives among seeing links and relationships of the different topics. These help in understanding the phenomenon and relating it to the research question and theory. First, I made two comprehensive literature reviews of the main fields of nonverbal communication, leadership behaviour and animal behaviour.

Figure 2 Research Strategy and structure of the study (made by author)

The chapters 3 and 4 are the result of these reviews. The key contributors in the field of nonverbal communication are Ekman, Friesen, Morris, Hall, Knapp and Hall, Darwin, Pease and Pease, Goman as well as Reiman. These are psychologists, zoologists, biologists and ethologists that have studied the phenomenon of nonverbal communication tremendously. Especially Ekman and Friesen, Darwin and Hall have produced the main theories and concepts the literature from today is based on.

Furthermore, the field of animal communication was divided into three subsections respectively of the wolf, horse and chimpanzee. Here, the main contributors were Mech and Boitani, McGreevy, Mills and Nankervis as well as Goodall, Waal and Mitani. All these authors are specialists in their field of study correspondingly to the horse, chimpanzee and wolf. Many others have studied these animals as well and are considered. During the search for literature it
became evident that these names are the most frequent and have the most comprehensive studies of animal behaviour.

Morris and Diamond are authors who brought both fields of human and animal together when they studied the human as zoologists. They made an effort to show how the behaviours of humans are linked to the animal past and how this is affecting the behaviour of the human even today.

Seeing the different approaches within these topics, the literature review shows how the diverse fields can be brought together. A constant dialogue between the topics and the implications of certain behaviours for all species was taken into consideration. Also identifying key aspects of leadership behaviour for the further analysis of nonverbal communication was an aspect of the literature review. During writing, I also used examples to illustrate certain aspects of behaviour better.

Secondly, the strategy of the research was finding specific nonverbal cues for each identified area which correlates with leadership behaviour and fits in the categories of nonverbal communication. A sampling had to be done to get the results needed and the results can be seen in chapters five through seven. This again was a literature review on different papers and books written about nonverbal communication cues. The sampling of these books and papers was based on the literature review which was done beforehand. The selected literature was based on the main authors whose ideas were shown in the previous chapters.

After the sampling, data collection and analysis had to be done in order to be able to show the different behaviours in leaders. How I collected and analysed the data will be shown later in the research design. In the end, the results were discussed thoroughly, and the research question was answered in the chapters eight and nine.

Before I come to the research design I will discuss why a theoretical instead of an empirical approach for this study is used, in order to gain a deeper understanding of the methodology.

2.2 Theoretical or empirical

When choosing a research design, I first had to know whether I wanted to do a theoretical, or empirical study. While empirical studies focus on either a quantitative approach which emphasises more on measurements and quantifying data, or a qualitative approach which accentuates on words as data and how a person is seeing their social world (Bryman 2016). A
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A theoretical study is used to combine previous studies in order to gain a better and deeper understanding of the phenomenon studied.

Mathematicians and philosophers use theoretical research regularly, but also social scientists make use of this approach. Mathematicians as well as philosophers use existing studies and the calculations or discussions of these to elaborate on a phenomenon and describe it better. Social scientists do the same and build their theories through theoretical approaches (Sheppard & Suddarby 2017). There are scientific magazines which only accept theoretical papers such as Academia of Management Review (Academy of Management 2018). In social science literature this approach is often forgotten to be explained. Finding books or articles on different techniques on how to use this approach was not successful.

It is usually used to determine whether it makes sense to do an empirical study about this topic in the first place and which angles and implications should be considered within such an empirical study. Furthermore, it is used to build theories and test them on other theories. (Sheppard & Suddarby 2017)

Because there was not much literature that combined the three areas of this study (figure 1) in depth, the first impression was to improve the understanding of the phenomenon and to see where it is of value to do an empirical study.

Therefore, a theoretical study is more appropriate for this topic. Nonverbal communication is much about personal interactions and the ability of being aware of the own in addition to communication signals of others. I am not measuring how often nonverbal signals occur in an interaction I focus on the fact what kind are occurring and where these might come from in comparison with animal behaviour. Therefore, a theoretical approach is more fitting with looking at the people and in my case also at animals that use nonverbal communication and being able to interpret how certain behaviours can enhance the leaders’ ability to communicate.

Furthermore, a theoretical approach is more useful in this research because I focus on theories and written texts in addition to pictures to analyse the nonverbal cues. Bringing three research topics together like animal and leadership behaviour as well as nonverbal communication is interesting and a challenge. Noting differences and similarities as well as unique behaviours is quite difficult and leaves a lot of room for interpretation. Therefore, the quality of the sources had to be considered too, which will be discussed after the research design.
2.3 Research design

The research design is essentially the structure for the data collection together with the analysis. It ensures the quality of the whole study with reflecting on which literature is accredited as valuable and which theories or models are not used due to not being confirmed by other studies. (Bryman 2016)

For this theoretical study, I chose to compare human and animal leadership behaviours in various categories. These categories emerged out of the primary and secondary literature reviews and the most comprehensive studies determined which different categories were used. In this study cases and general literature of the different nonverbal behaviours of the animals, wolf, horse and chimpanzee together with the nonverbal behaviours of humans in leadership situations are presented and discussed. I looked at the differences, similarities and at unique behaviours that can teach us how to be more effective leaders.

The studied animals and interactions were sampled because there was not enough access and time to consider all animal species and human interactions (Bryman 2016). The sampling of these three animals and the human was purposefully because these four samples were chosen in reference to the research question to cover a broad field of nonverbal communication. The context of nonverbal communication in animals and humans can be seen in the samples. The animals are spread out in distinct categories of mammals, namely predator, prey and primates which give more variety in the behaviours. Through this sampling it was easier to go deep into an animal’s behaviour and to look at different situations and their nonverbal cues.

Because there is no textbook that describes the research method for a theoretical study, I will describe how I conducted the collecting of the data from other studies. The research method is the technique for collecting data (Bryman 2016).

The studies which I used were found during several search cycles from the two literature reviews. Within the found literature a selection took place on the hand of validity of authors and the suitability for the connection of the three topics. Choosing the right authors was critical for the validity and reliability of the study. Why I chose certain authors will be discussed next.

The data collection therefore, was a third study of literature on how the animals and human in certain leadership categories behave. When an interesting behaviour occurred in one species the theoretical research was continued for the other species and looked if similar behaviour or different ones were occurring.
This process of finding the different nonverbal behaviours for the animals and human was a back and forth between different areas of literature. After collecting different nonverbal cues, a sample was made for discussing these in the study. The sampling was done by taking into consideration how well the behaviours were studied in different circumstances. Only behaviours which could be seen in wild and captive animals were contemplated. Also, the most important nonverbal signals of the animal’s social life were taken into consideration.

After finishing this intensive study of the literature on various levels, all findings were taken in consideration and discussed thoroughly in connection to the research question.

2.4 Choosing the right literature
When starting this study there were only a few authors I was familiar with that have described nonverbal communication or leadership behaviour. The starting point for these two topics began with a wide search on the topics and soon several authors appeared more frequently or were often cited by others.

These authors were Ekman, Friesen, Hall and Darwin for nonverbal communication and emotions. Finding the first published articles and books that these authors have written was crucial for the first literature review as well as for the understanding of the topic. Many other authors which cited these four main authors and have written their own books besides conducting research on the topic and adding their own thoughts and theories. The ideas which were based on the basic methods were contemplated and gave a broader description and a more evaluated opinion of the topic due to further research. The four main basic theories are from the late 1900 when thinking of Darwin’s work or the 1950-70’s were the others conducted most of their theories and models.

Therefore, it was important to also look up how their work evolved over time and if their theories are still valid today. Considering other theories which tried to proof that there were mistakes in the basic models and ideas was a critical step. However, these critics often got even more critique and were not accepted in the research community.

An example of such a theory is that of Margret Mead claiming that all behaviour including emotions are socially learned and not innate how Darwin was describing it. Ekman was a mere supporter of Darwin’s idea and proofed it with extensive studies on human emotions. He visited tribes deep in forests that had no connection to the public and studied their emotions, finding
that they show the same emotions as the rest of people. Hence, concluding that these are innate. (Mead 1975, Ekman 2006)

Another interesting example of finding the right literature and struggling with different concepts is how nonverbal communication is categorized by many different authors. While Ekman and Friesen (1969) only had categories for the body language itself others such as Mehrabian (2007) said that nonverbal communication consists of more than just body language such as tone of voice and space. Others added to these categories, that also how we look is important and gives a message to others as well (Knapp & Hall 2006).

Surprisingly, there was not one set of labels that has been used for categorizing the different components of nonverbal communication. When looking up categories of nonverbal communication some have only three (e.g. Knapp & Hall 2006) and others have four (e.g. Reiman 2007). Another model I came across was the one of Synergology. This is a term used for categorizing nonverbal communication. They have six different categories. When looking at this idea it already said it was not scientifically proven but something that was observed. And indeed, when looking up the word Synergology in the research data base, there was not much to find. But what I could find was more critiquing the term and categories, because it was not proven by other studies and authors had to test the theory themselves like Denault and Jupe (2018). They found this approach not working on all levels of nonverbal communication and considered that the use of this approach should be with caution.

The categories found in this study are merely overall topics, which were mostly found in the studies that have been considered. The names of these categories were taken from the authors that have studied them. These categories made the most sense to mention within this study, but it does not say that this is the only way nonverbal communication can be categorised.

For the nonverbal cues of humans several books were written dealing with how nonverbal cues effect business life and other areas of one’s life. Especially psychologists have written about nonverbal communication and the effect of it. The main authors which were considered for this study are Goman, Reiman, Morris, Ekman as well as Pease and Pease. The basic ideas of Ekman can be found in the work of the psychologists and they furthered their findings with other theory.

The books which have been used were considered carefully as to where the information is based on and that references were provided indicating that the content on nonverbal cues was based on observations.
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For the animal literature it was a bit easier to search through the amounts of studies that have been conducted. During my previous course of study I learned to interpret and analyse animal behaviour studies and have also conducted one by myself during my bachelor thesis.

Here also per animal the most frequently seen authors were considered as the basis of the literature research. Additional thoughts and studies helped to get a broad perspective on animal behaviour.

For the wolf the main contributors were Mech, Boitani and Ellis & Sloan. Especially Mech has done extensive research on the social life of the wolf including their communication. Furthermore, ethograms of wolf behaviour could be found in several studies of the mentioned authors which helped in narrowing down the behaviours needed for the study. (Mech & Boitani 2003, Rothman & Mech 1979, Peters & Mech 1975, Ellis & Sloan 2012) Other studies were considered carefully and were often based on findings of the afore mentioned authors.

In the wolf literature it was important to distinguish between the European and North American wolf, especially on how it lives in social groups. Considering this relevant fact in the study, the main focus was on the North American wolf for dominance behaviour because of the more prominent appearance in the packs they live in. For the other categories of territory and mating the behaviour of both was considered.

Literature for the horse was quite easy to find. There is an abundance of literature on the horse, sifting through the literature is more difficult. First steps were finding literature which concerned natural behaviour patterns which can be observed in the wild. Because horses are domesticated the impact of the human has to be considered as well.

Therefore, literature by equine behaviourists with in depth understandings of the natural behaviour were considered. The main authors were McGreevy, Dierendonck, McDonnell as well as Mills and Nankervis. These authors have made comprehensive studies on not only domesticated horses but also on feral horses and researched the social life in addition to nonverbal signals and what their meaning is in the social construct. (McGreevy 2012, Dierendonck 2006, McDonnell 2003, Mills & Nankervis 1999, McDonnell & Haviland 1995) Other studies on feral horses were contemplated when looking at specific behaviours such as scent marking for instance and needing more scientific background to state the importance of such behaviours.
The chimpanzee literature was quite comprehensive as well. With the well-known researchers as Goodall and Waal, others such as Mitani have contributed a lot of behavioural studies on chimpanzees. Chimpanzee literature about wild and in captivity living animals were both considered. The comprehensive longitudinal studies of Goodall (2010) and Mitani (2010, Mitani et al. 2012) in the wild gave interesting insights into the behaviour of the chimpanzee as well as the longitudinal studies of Waal (1998) in the Burgers Zoo in Arnhem, The Netherlands. Looking at all the studies, the behaviours are not very different when it comes to leadership behaviour. However, some caution had to be taken when considering the behaviour of the animals in captivity because sometimes females would take on a male role out of necessity which in the wild does not happen too often (Waal 1998).

Looking at the animal literature it was important to understand the difference of captive as well as free living behaviours. The behaviours shown in the wild were taken as the base line whereas the behaviours shown in captivity were treated with a bit more caution in order to have the natural behaviours. Stereotypic behaviours of domesticated animals were not considered in this study.

The last interesting point of view from the literature and why I chose to include it in the study was the one of Morris (1994, 2002, 2005) and Diamond (1992), who looked at the human as an animal and deciphered the behaviour from a zoology point of view. They made the step of looking at behaviour from the point of view I was interested in, namely how behaviour is connected to the animal world. Viewing the human from this angle, they described fascinating links to the animal past. Reading this kind of literature made it possible for me to also lay links to the animals chosen and enriched the study with another viewpoint.

Literature on leadership behaviour was interesting to go through. I needed to find a connection to the animals, so the first step I took was looking at how leadership in animals was defined. This resulted in dominance hierarchy. Regarding this, further research into dominance literature, it became evident that dominance is the ability to have power over resources. This was the starting point of the different leadership categories which are explored throughout this study and can also be found in the human leadership literature (e.g. Bennis 2009).

2.5 Limitations
Finding the leadership categories was therefore more based on animal behaviour than human behaviour in order to make comparisons. Nevertheless, these categories are also seen in human leadership behaviour. Other categories of only human leadership behaviour were not considered.
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with an exception of a short overview of emotional intelligence (Bennis 2009, Bennis & Nanus 2005) in chapter eight. This is needed to draw conclusions for the implications of the nonverbal communication which is rooted in animal behaviour.

Other limitations such as time was probably one of the most challenging limitations of this work. To write this thesis in three months influenced the research design and methods as well as the extent of the overall topic. The first intent was to observe leader and follower interactions to see what kind of behaviours are used but observations take quite some time to prepare and analyse when done. Because time was limited with this study I chose not to observe live interactions but rather take texts and other documents of other observers and analyse these.

Narrowing down the topic to certain behaviours and animals was essential in order to get an overview of what is possible when looking at animal and human behaviour at the same time. This limits the amount of interactions which can be described nevertheless the interactions chosen could be described with more detail. Nonetheless, I hope that I managed to give an insight into the topic and others enjoy reading it like I enjoyed studying and writing it.

Next the literature about social behaviour and nonverbal communication of human, wolf, horse and chimpanzee will be explored.
Social behaviour is defined as behaviour which takes place between two or more individuals within the same species (Koenig & Dickinson, no year). Communication is a vital part within the concept of social behaviour. While communication consists of verbal and nonverbal parts, the verbal communication in humans is far more developed than in animal species. The main communication within animals is nonverbal communication. As Reiman (2007) wrote that ‘body language is our original shared language’ (p.17) and ‘this highly effective means of communication connects us not only with other humans but with other primates and even other mammals such as dogs and horses.’ (p.18)

Before going into detail about nonverbal communication it is essential to understand how communication takes part in our life, regardless if it is verbal or nonverbal communication. For a communication process to take place there must be a sender, a message and a receiver. The sender will send a coded message with either nonverbal or verbal cues, in most situations both, and the receiver will decode the message with the means he or she has. Between receiving the message, it could be obscured through different barriers such as environmental influences or social learning. Environmental influences can be loud noise obscuring the message. Barriers through social learning can be different upbringing and learning about things differently in life. The receiver is always the one that decodes the message with his or her own experiences and makes an interpretation of the message. Therefore, the understanding of the message is always in the eye of the receiver and the capability of giving a meaning to the cues. (Barnlund 1970)

The whole body is involved in nonverbal communication. This means that arms and legs, the torso, the head and facial expressions are part of the communication process. Furthermore, space, physical characteristics and smell are part of the nonverbal communication. It is not likely that a message can be detected by only looking at one signal sent, but it is a cluster of signals within a certain context that will make up the message. (Reiman 2007, Goman 2011, Ekman & Friesen 1969)

I like to begin with outlining the various levels of nonverbal communication in addition to describe the social behaviour of predator, prey and primate with the example of the wolf, horse and chimpanzee.
3.1 Nonverbal communication

Nonverbal communication is any communication signal that does not rely on any words. The nonverbal cues can either be speech related or speech emphasizing or underlining the spoken word or unrelated, having a message of their own. (Knapp & Hall 2006)

Ekman and Friesen (1969) specify the content of nonverbal cues with the terms of usage, origin and coding which I will describe underneath.

3.1.1 Usage

Usage describes where and when an act of nonverbal communication is usually seen or used regularly (Ekman & Friesen 1969, p.53). This gives an indication when to expect such behaviour. The meaning of an act can either be shared or idiosyncratic (Ekman & Friesen 1969, p.54). The former meaning is mutually understood and the latter only has meaning to one individual.

Furthermore, Ekman and Friesen (1969) describe how a message can be informative, communicative or interactive (pp.55+56).

- **Informative** messages are mutually understood but are not necessarily decoded in the right way or understood correctly by the receiver.
- **Communicative** messages are used to send a specific message and can be either shared or idiosyncratic, also meaning, that misunderstandings can happen when not decoded in the right way.
- **Interactive** messages are used to change another person’s behaviour.

Messages can also be sent with more than one implication. For instance, a message can be sent as informative-interactive thus creating a message which is shared by others as well as influencing their behaviour. (Ekman & Friesen 1969)

Let’s have a look at this concept from the leadership point of view. The role of a leader is being able to create a shared vision and being able to communicate this effectively (Bennis & Nanus 2005, Eikenberry & Harris 2011). With influencing the followers’ behaviour, the leader can create an environment with trust, respect and the ability for everyone to reach their full potential. Therefore, the leader must be aware of the messages he or she is sending to the followers.

3.1.2 Origin

The meaning of origin according to Ekman and Friesen (1969, p.59) is where the behaviour came from in a person. They describe three different types of origin which have been heavily
discussed in the world of nonverbal communication. The first origin is that the behaviour is *innate*, and a person is born with it. Secondly, the acts are *universal* to all members of the species for instance using the hands to eat. Thirdly, the behaviours are *learned* through culture, society, interactions or learning a task.

The first origin was the most discussed and researched origin for many years in the early twentieth century. Anthropologists like Margret Mead and Ray Birdwhistell were convinced that nonverbal behaviour is only developed by parental and cultural aspects (Matsuoto, Frank & Hwang 2013). Whereas Darwin (1872) about 50 years earlier already described that there are behaviours which are innate to humans and animals. A study done by Eibl-Eibelsfeld with blind children has shown that there are innate acts of nonverbal communication (Knapp & Hall 2006). Thus, providing evidence that behaviours can be genetically based.

### 3.1.3 Coding

Coding is an important part of the message which is described as ‘the correspondence between the act and its meaning’ (Ekman & Friesen 1969, p.60).

The coding of a message can either be *extrinsic* or *intrinsic* in relation to the meaning of the message. Two extrinsic coding are differentiated the *arbitrary* coding, which is a cue that does not have any similarities with the actual meaning and the *iconic* coding, which is giving a hint within the cue what the meaning is. The intrinsic coded cue is actually giving the full meaning of the message by being visually the same as the meaning. (Ekman & Friesen 1969, p.60).

Because of the visual similarity of iconic and intrinsic codes of a message, several types are distinguished. Using movements to illustrate an experience and therefore having a visual similarity with the meaning is an iconic coded message and described as *pictorial*. Another iconic message is a *rhythmic* movement which goes along with the movement of an expression and having no content of the message but just accentuating the importance of a spoken message. Furthermore, there are two types which can be both iconic and intrinsic coded, these are the *spatial* and *kinetic* movements. The former are movements which show space between people or objects. When using just the hands to indicate the space it is iconic, when actually moving the whole body closer or further away it is intrinsic as well as kinetic. The last coding of a message is purely intrinsic, namely *pointing* movements. Here the act is pointing with a finger or hand directly at something or someone to create awareness for this person or object. (Ekman & Friesen 1969).
Having now understood how messages are used and coded it is time to look at the various categories of nonverbal communication in addition to when and how they are used in everyday life.

3.2 Four categories of nonverbal communication
Throughout the twentieth century many researchers were busy with wanting to understand the different types of nonverbal communication and tried to find patterns and sort different behaviours in categories. In the following I describe the categories for nonverbal communication which are used most often by studies to gain an insight into the topic. The categories are proxemics, the study of space around people, para-verbal cues, the sound of the voice, physical characteristics, the symbols of attractiveness, and body language, the use of the body to communicate.

3.2.1 Proxemics
Proxemics is described as the distance between two people which can be measured. There are different meanings of distances between people depending on the relationship they have with each other. Hall (1968) describes four zones of space around a person which he defined as personal space. The four zones can vary from culture to culture and of course from person to person but the following measurements are a rule of thumb for the four zones.

- **Intimate zone**: This is the closest zone which usually ranges from 0-45 cm. The zone is divided into close and not close by Hall. Close represents that the two can touch and not close that the bodies are not touching but one can easily reach around the other.

- **Personal zone**: It ranges from 46-122cm. This zone is described again in close and not close where close means that both persons have elbow room. Not close is by almost being able to reach the other person with an extended arm. This zone is usually used by friends and colleagues who the person knows for a longer time.

- **Social-consultive zone**: It starts at 123cm and reaches up to 275cm. The persons are further apart, and the end of this zone is about when two people can just reach each other with stretching ones’ whole body. This zone is often used during professional encounters.

- **Public zone**: Starting at 2,75 meters and ranging up to 9 meters it is the farthest zone. People are aware of each other but are not too close to a person to make them feel uncomfortable. This distance is often used for public speaking.
Leaders can use this knowledge of personal space to first define their own comfort zone and being aware of how other people use it. What feels comfortable to someone changes with each relationship and through social learning. When interacting with people the personal space can become a powerful tool when figuring out the relationship and how somebody else feels. (Knapp & Hall 2006, Reiman 2007, Goman 2011)

The difference of space normality in cultures is very important to know. While Americans for instance are having a conversation at about 60cm Europeans are usually comfortable at around half that distance. To avoid awkward moments for anyone it is important to know this difference in distance when dealing with a cross cultural encounter. (Atwater & Waldman 2008)

3.2.2 Para-verbal

Para-verbal behaviour is the use of the voice. It is not important what is said but how it is said such as the tone of voice and how fast. There are two types of sounds according to Knapp and Hall (2006). The sound made by vocal cords and sounds made other than from the vocal cord such as the oral or nasal cavities.

The loudness, speed and duration of sounds are the most studied and many indications have been given on how the voice is used as a nonverbal cue. When raising the voice for instance, the other person knows the message needs to be understood and the nature of raising the voice can be anything between frustration, anger, stress or environmental influences such as loud noises. It is always important to consider the overall picture of the nonverbal cues of sound and the other nonverbal cues that are given. (Knapp & Hall 2006)

3.2.3 Physical Characteristics

Physical characteristics are nonverbal signals which are not used as a movement. These characteristics are clothes, perfume, make-up, hair, body shape and other attributes which make up the physical appearance of a person. The things which are not bound to the physical attractiveness of a body such as clothes and make-up are also called artifacts. These influence the appearance but can also be changed daily. (Knapp & Hall 2006)

Leaders can use their appearance and artifacts as status symbols and therefore create an attractive picture for their followers. In showing that the leader takes care of him—or herself can also mean that he or she can take care of others. Furthermore, being considerate of someone else’s culture or social group characteristics when interacting can help with not insulting someone or it can even have a positive impact on the relationship.
3.2.4 Body language

Body language consists of gestures, facial expressions, eye behaviour, touching and postures which are used to convey messages. The messages can have different meanings and used in different situations and context. Underneath the five most used types of meanings can be found as named by Ekman and Friesen (1969) in addition to other thoughts of different authors.

Emblems

The easiest to understand acts of nonverbal communication are the emblems. These are acts which can be translated directly into speech and are mutually understood by everyone in the group. They are used when the environment prevents a communication via voice because of distance or a too loud noise. The emblems are used within consciousness and are more deliberately used than other nonverbal behaviours. They originate through learned behaviour and are usually different in other cultural groups. (Ekman & Friesen 1969, pp.63-68, Knapp & Hall 2006).

Illustrators

The illustrators are acts which are closely related to verbal communication and draw a picture of the said. There are six types of illustrators. The batons accentuating certain words, ideographs drawing a picture of direction, deictic pointing acts, spatial giving an indication of distance and space, kinetographs movements of the body and the pictographs illustrating the actual message. (Ekman & Friesen 1969, pp.68-70, Knapp & Hall 2006, Morris 2002)

Illustrators are learned through imitation within a social group. The message they convey is shared by the social group they are learned in. This can vary between social groups. The batons and ideographs have however no meaning when viewed without the spoken language. Whereas the others can be understood independently. (Ekman & Friesen 1969, pp.68-70, Knapp & Hall 2006).

Affect Displays

Affect displays are shown within the face and with help of the facial muscles. They show the basic emotional state of someone. Darwin (1872) already stated that there are similarities in human and animal emotional expressions and that some of them are innate. Ekman and Friesen (1969) described six of the basic emotional facial expressions namely fear, happiness, sadness, surprise, disgust and anger. Ekman (1977) added contempt to this list becoming the seven most basic facial expression in humans.
While these seven facial expressions are shown universally in humankind, the way these expressions are evoked depends on the social group. The stimuli that is needed for someone to show sadness can vary from group to group and must be considered carefully when studying communication. (Ekman & Friesen 1969, pp.70-81, Morris 2002, Darwin 1872, Ekman 1977)

Furthermore, the social acceptance of displaying these emotions in public or private are also learned early on in life and vary with each social group. However, four rules are taken into consideration by social groups. To what extent they are used is the only difference between the social groups. These four rules are either de-intensifying or over-intensifying the presence of an affect display, looking neutral or masking the display with another one. An affect display can affect the whole body. Furthermore, the posture and other movements can occur in correspondence. (Ekman & Friesen 1969, pp.70-81, Morris 2002, Darwin 1872, Ekman 1977)

Moreover, whether an affect display is suitable or not appropriate in a given situation depends also on the age, social status and sex of a person. The affect display can be used independently as well as with speech either amplifying the message or contradicting it. There is usually no awareness of the occurrence of such a display because they are established habits. (Ekman & Friesen 1969, pp.70-81)

Regulators

Regulators are linked to the speed and flow of the conversation and help with the interaction of two or more people. They are for example the agreeing head nod, eye contact and shifts in the posture or space. Moreover, regulators are usually used unconsciously through habits. They can either be shown only every few sentences or when ending a section. Occurrence can also be when wanting to emphasize a connection of two points made with a position change in addition to a whole postural change when going out of the conversation or having the need to be out of the conversation temporarily. (Ekman & Friesen 1969, pp.82-84, Knapp & Hall 2006)

Adaptors

Adaptors are difficult to describe because these are acts which are learned early in life and are portrayed only partly when getting older. The underlying meaning of these acts cannot easily be seen and therefore, it often looks like the act was done out of context. There are three different types described by Ekman and Friesen (1969): the self-adaptors, alter-adaptors and object-adaptors.
Self-adaptors originated in grooming behaviour and are not related to speech. Only part of the behaviour is occurring because it is not appropriate to act out these behaviours in public and therefore, the inhibition of performing the behaviour is making it shorter. The adaptor is often related to feelings and emotions from the childhood and can be shared by the social group or it has only a personal meaning. The self-adaptor often consists of face and hand movements. (Ekman & Friesen 1969, pp.84-92, Knapp & Hall 2006)

Alter-adaptors are acts which are related to early interactions in one’s life. They consist of fragmented behaviour of for instance protecting or attacking someone. These acts are shown as habits in interactions with other persons and can give an insight into feelings and expectancies of interpersonal relations. The person is often not aware of using these kinds of adaptors. (Ekman & Friesen 1969, pp.84-92, Knapp & Hall 2006)

Object-adaptors are learned through a task. An emotional state can trigger the occurrence of a fragment of this adaptor which usually occurs with awareness of the person. These adaptors can even have a meaning and message. (Ekman & Friesen 1969, pp.84-92, Knapp & Hall 2006)

After having looked at the different dimensions of nonverbal communication in humans it is time to introduce animal communication.

3.3 Animal communication

Animals communicate also with nonverbal communication and because of the lack of language, it is their primary source of communication. Animal behaviour is studied extensively throughout the years in order to get to know the communication signals they use. The animal’s nonverbal communication repertoire consists of proxemics, body language, sounds, scent and chemical communication as well as colours. Not all animals communicate with all the signals mentioned. Their communication is best suited to the concept of nature and nurture and how the species’ can survive in a given environment. The communication of an animal is adapted best to its needs, just as the communication of humans. (Reece 2014)

3.3.1 Predator, prey & primate

Within the animal kingdom there is the classification of predator and prey as well as primates. A predator is an animal which hunts for its food and has several bodily characteristics that enhance this life style. Prey animals are continuous eaters of plants and are usually hunted by predators. These animals also excel in having specific traits which help them with staying alive as well.
One key factor of the predator-prey relationship is that predators go forward and attack in straight lines while prey moves in circles and curves. Predators focus on their prey and prey animals are aware of everything that goes on around them. (Irwin & Weber 1999)

Primates are both hunters and gatherers. They can survive both on plant and animal-based nutrition and developed other characteristics needed for their lifestyle. Furthermore, there are several types of living together in the animal kingdom, all is dependent on the lifestyle and environment they live in. There are dominance hierarchies as well as living collaborations, with alpha males or females. It is interesting to see what kind of nonverbal communication we can see in different animals and what we can learn from them.

To illustrate the nonverbal communication of predators I chose to have a closer look at nonverbal communication of the wolf. For the prey animal I chose the horse and for the primate the chimpanzee, which is the closest related to humans (Bradbury & Vehrencamp 2011). Before looking in depth at the nonverbal communication of these animals it is important to understand their social behaviour. How they live together and are bringing up their young, are all influencers of the communication they use.

3.3.2 Wolf

Wolves live together in their family just as humans do. While the European wolf only lives together as the breeding pair with their offspring, the North American wolf forms packs and has a social hierarchy within them (Bush 2007). The mating pair is in both the basic unit of the wolves social group (Ellis & Sloan 2012, Mech & Boitani 2003, Derix et al. 1993). It can consist of either one female and male, a male with several females or other variations (Mech & Boitani 2003). The breeding female gets pubs every year and the pubs stay with their parents for at least ten months and for as long as five years (Ellis & Sloan 2012, Mech & Boitani 2003).

Both the European wolf as well as the North American wolf have their territory which they mark and defend from other wolves. The wolf is a highly territorial animal which lives in its territorial social group. (Mech & Boitani 2003, Rothman & Mech 1979, Ballard, Whitman & Gardner 1987, Meier et al. 1995, Peters & Mech 1975)

Other wolves can be adopted into the pack. The pubs never stay in their natal pack for breeding and leave as soon as they find their own territory or breeding partner. Wolves live in packs because it is convenient for the parents to nurture their young and teach them vital knowledge for survival. Within a pack there is a hierarchy of the alpha wolves which is the breeding pair, the beta wolves which are usually the biggest ones and are there to protect and fight. The beta
wolves can also be another breeding pair within the pack. As well as the omega wolves which are the wolves lowest in the hierarchy. (Ellis & Sloan 2012, Mech & Boitani 2003, Packard 2010, Bush 2007, Derix et al. 1993)

Communication is done by body language, proxemics, scent and distinct markings in the fur. For instance, the alpha pair usually have more distinct markings in their face and darker fur than the rest of the pack. This makes the alphas more visible to everyone. Marvin (2012) described that ‘wolves live in a multi-sensory social world in which members of the pack organise their lives through complex signalling of their individual emotional state and their physical being to others and their response to others’ signals.’ (p.27)

The visual communication through the body is often done with the tail, ears, nose, posture, and head position which are dependent on the social rank in the pack (Ellis & Sloan 2012). Hierarchy is established through dominance behaviour which includes fighting ability, status, territory and victory (Bradbury & Vehrencamp 2011). The essential elements of dominance and leadership behaviour will be discussed in the next chapter.

The characteristic bodily features of a predator and thus also of a wolf are its eyes being in front and capable of focusing on prey. They have sharp teeth that are used to kill the prey and an athletic body which can sprint. ‘When predators are present prey are more alert and are closer to refuge. Ecosystems are influenced by the presence of wolves and changes behaviour in prey.’ (Musiani, Boitani & Paquet 2010, p.84)

3.3.3 Horse

The horse in the wild lives together in herds. A herd usually consist of several family bands which have a stallion and one or several breeding mares and their offspring. When several mares are present there is an alpha mare which responsibilities is to find the best foraging grounds. Whereas the stallion is there for protection against predators or other stallions. (McGreevy 2012, Mills & Nankervis 1999, Dierendonck 2006)

Two and three-year-old stallions will leave the band and usually go and join a bachelor group consisting only of stallions. Within this group there is a pecking order where usually the older, more experienced, are the leaders. The young stallions learn how to fight and defend themselves through trying to climb up the hierarchy. Often agonistic behaviour is seen. This behaviour includes fighting, aggression and submission (Evans et al. 1990, p.677). Sometimes when encountering another band with mares they will try to fight the established stallion or try to steal younger mares which are looking for a new band. (McGreevy 2014)
The fights between stallions can be brutal and often end with deep bite marks breaking the skin. When a new stallion enters a band, the old one must leave his mares behind. (McGreevy 2012, Mills & Nankervis 1999)

Many nonverbal signals are used in the communication when living in bands. They use their head position, tail, ears, snout, eyes, body position and spacing to each other. Leadership behaviour consists mostly of who pushes whom and therefore can decide where a member of the herd is going and control their movements. (McDonnell 2003, McGreevy 2012, Mills & Nankervis 1999, Irwin & Webber 1999, Dierendonck 2006)

Horses have no territory but a home range where they look for food and water and move quite a bit during their foraging behaviour. Horses usually spent about 14 hours per day foraging and moving around. They have resting intervals every four hours where they sleep or doze off. (McGreevy 2012, Mills & Nankervis 1999, Dierendonck 2006)

The horse as a prey animal has some characteristics that help detect predators early on in order to get to safety. These characteristics are an almost 360° vision because of the position of the eyes on the side of the head. They also have the ability to get away quickly even from a resting position. The vision of a horse enables it to be aware of everything around it and therefore being capable to run away when spotting a predator. (McDonnell 2003, McGreevy 2012, Mills & Nankervis 1999)

Horses also can rest and sleep while standing. When standing in the rest position the muscles of a horse are not used, the skeleton is carrying the whole weight without them falling over. The muscles can respond in a matter of seconds to be engaged again when necessary. (McGreevy 2012, Mills & Nankervis 1999)

### 3.3.4 Chimpanzee

‘The social organization of chimpanzees is too human to be true.’ (Waal 1998, p.4) They are only found in the wild in Africa and have three known subspecies with a low population density of about five animals per square kilometre. Chimpanzees live in fluid social groups consisting of breeding females and their offspring as well as breeding males. The group size can range from 20 to 160 individuals and subgroups can be formed within a social group. In chimpanzee communities, the males are more social and have daily aggressive confrontations. The social hierarchy within the males is therefore easily detectable. On the other hand, the females are not as social and do not have frequent encounters with each other. But they also have a hierarchy
which is harder to detect. (Mitani 2010) Relationships are usually formed through grooming (Goodall 2010).

Females give birth to their first offspring at the age of 13-14 and have a young every five to six years. The baby is dependent on its mother for the first three years for milk and transportation. (Mitani 2010, Goodall 2010) The young also learn essential skills to develop relationships and gain and keep their status (Mitani et al. 2012). Males are usually physically and socially mature at age 16 and they stay in their natal community while females are mature at age ten and leave their communities a year later to find a new community and mating partner. When arriving in the new community the females usually experience a phase of two to three years of adult sterility and then get their first baby. (Mitani 2010)

Chimpanzees are omnivores and their diet consist of fruit, leaves and small prey such as rodents. They use tools to get to ripe fruit which is hanging too high to reach and for getting termites out of their mound. For foraging chimpanzees travel within their territory range of 7-35 square kilometres. (Mitani 2010)

Chimpanzees form coalitions for instance for meat sharing or hunting patrols to ensure every one of the community has enough food. Furthermore, they have boundary patrols for their territory and males are very aggressive towards individuals of other communities when they get too close. (Mitani 2010) They can also form a coalition to overthrow a higher ranked animal and afterwards determine their status within the coalition anew (Waal 1998).

The physical characteristics which are unique to primates are the way they can use their hands. The ability to be on the hind feet while sitting frees up the hands for picking fruit or tools up. Furthermore, the hands are used for social behaviour such as grooming. (Morris & Parker 2009)

Having seen how nonverbal communication is used and how the three animals live in social groups, it is time to bring in the third topic of leadership behaviour. The next chapter will give an overview on how leadership behaviour is defined in the animal kingdom and which categories are used in this study.
Leadership behaviour is a complex phenomenon. How to become a leader and be effective is a question lots of people are asking themselves. In this chapter I will give an overview of leadership behaviour and how nonverbal communication is connected to it. In fact, communication is one of the most vital skills a leader should have. This includes the nonverbal communication. Several studies and books have been written about becoming a leader and how to be effective as a leader such as *On becoming a Leader* by Bennis (2009) and the article *The Human Side: Understanding the Difference Between Management and Leadership* by Maccobi (2000).

Tannenbaum mentioned that

‘… interpersonal influence becomes dependent upon the communication skills of the manager, and leadership effectiveness can be viewed as a composite of interpersonal relationships. The interaction that occurs in each relationship can contribute to the success or failure of the manager's efforts to accomplish certain objectives.’ (Remland 1981, p.18)

Darioly and Mast (2014) as well as Goman (2011) stated that understanding body language is a very important factor for the effectiveness of leadership and building trust as well as for managing change and promoting collaboration. When thinking about it, the body language of a person when meeting for the first time can tell a lot about his or her state of mind, whether being anxious, excited, or sad, to mention a few.

How can this help a leader? Imagine going to work in a new company and it is the first day of being a manager of a team. It is vital for the new leader to be able to connect with the people that work under him or her and with his or her other colleagues. Being able to get a first impression of a person just when looking at him or her in the first moment can help assess the situation (Re & Rule 2016). Furthermore, when being aware of ones’ own body language in this situation the leader is capable to send signals to his or her new colleagues that are inviting and showing he or she is happy to be there and to work with them.

How effective body language is can only be seen by the receiver of the message. In a study about perception of a leaders’ competence on subordinates by Lybarger, Rancer & Lin (2017), they found that using immediate nonverbal communication during a performance review heightened the positive and more competent perception of the subordinate. The receiver is vital
in whether the message is received properly or as intended as shown in the previous chapter. This will also decide if the new leader is perceived as good or bad. Misunderstandings usually occur when mixed messages are send. This can happen intentionally or unintentionally. When people are not aware of their nonverbal communication this might arise more easily, and they do not notice that the followers’ perception of them is not what was intended in the first place. (Goman 2011)

A fitting example for unintentionally wrong nonverbal communication is when employees are going on a trip where they are enjoying time outside the office for team bonding with different activities. When being in an informal setting away from the office and wearing more casual clothes the employees feel more comfortable and the trip is more productive. When the manager or leader of the department comes and joins an activity in his tailored suit with a fashionable tie and an expensive watch on his wrist, the mood in the group will automatically change once he enters the room. There is nothing wrong with wearing nice clothes to the office and having a sort of dress code when working with clients. It is part of the corporate culture, but there are situations where this attire is not appropriate, and people will feel intimidated and underdressed. This has a negative effect on the productiveness or outcome of this day. This could have been easily avoided when thinking about the nonverbal communication that is sent alone with the clothes the leader is wearing. On top of that the posture and other gestures are more dominant with an attire like that (Goman 2011, Reiman 2007).

So, what are exactly leadership behaviours? Let’s have a look at the leadership behaviours of animals and then develop these towards the human leadership behaviour.

4.1 Dominance

Leadership behaviour in animals is often linked through a hierarchy with dominance. In animals this is resolved through aggressive behaviour. Dominance is the ability to fight and to have the motivation to fight. It is divided in three sub categories of status, territory, and victory. Dominance of one animal over another can only appear through repeated interactions and winning these interactions continually. Animals in groups have interactions with each other over food, space, breeding and grooming. During these interactions the animals with the most dominance displays will be on top of the hierarchy and the ones showing the most submission and taking the most hits will be at the bottom of the hierarchy. (Bradbury & Vehrencamp 2011, Bernstein 2010)
Submission behaviour is the exact opposite of dominant behaviour and they go usually hand in hand regarding nonverbal communication. Taking for example an alpha male wolf in a pack that is trying to show his dominance to an omega wolf, he will make himself bigger through standing up tall with a stare down to the omega wolf. When he is not responding in a submissive way by crouching and looking away, the dominant behaviour of the alpha male will escalate until the omega wolf surrenders. (Mech & Boitani 2003)

What is important to see here is the opposite behaviour of the dominant and submissive. The dominant takes on a position which is bigger and higher up and the submissive is going in the opposite direction namely down and away. When transferring this to humans we can see the same thing happening. The person with more dominance will take a tall stance and projecting his or her power through the whole body. The other person will, when not wanting to confront the other, take a more crouching position such as shoulders slightly going down as well as eye contact shifting down. (Goman 2011) In fact, it is also proven that dominance and height is positively correlated. Taller individuals are more likely to get a leadership position than shorter ones. (Blaker et al. 2013, Gawley et al. 2009, Stulp et al. 2013)

However, humans do not usually assume dominance through aggression they have the capability to do this via vertical relations of power. Having power means that the person controls certain resources which are valuable to others. This for instance can be time, money, and affection. The person in power can achieve anything without someone interfering. Also, they are capable of influencing others’ actions to their own benefit and are not being influenced by actions of others. (Bradbury & Vehrencamp 2011)

When leaders thus reach the power of being dominant over the others, it means they can control the way the followers act and in which direction. This can of course only be positive when the relationship of both followers and leader is entered with a common sense and the ability of the leaders can be questioned throughout time in order to not fall into negative patterns. The leader thus has to be able to answer to demands and give a strong role model for everyone.

For power and status awareness being able to detect cues is very important. Men and women have different strategies and natural abilities to detect these signals. These are remnants of evolution. In the early years of the human, men were hunters and therefore had a more focused and narrower vision than women do. Women have a more peripheral vision and can take in more signals at once. (Goman 2011) We can compare this to the concept of predator and prey. While the man is more like a predator adapted to focus in on prey in order to be a successful
hunter, women are a bit more like prey animals always aware of everything around them. This doesn’t mean that one or the other is more or less alert of signals, they just do it differently and also interpret their surroundings differently.

Surroundings or having a territory to live in is another important aspect of leadership behaviour. Controlling a space with resources of food and breeding grounds is vital for survival and will be discussed in the following.

4.2 Territory
Taking leadership of a territory is fundamental for the existence of many animal species and even the human. Territory has a lot to do with dominance and essentially ownership and social control (Mehrabian 2007). It is deeply rooted in the humans’ past and connected to the animal life as well. The more dominant person or animal will have the vital resource of a home base to live on and raise his or her young and get enough food for them. The territorial behaviour is thus intriguing to have a closer look at.

As described earlier the wolf and the chimpanzee are very territorial oriented with their pack or communities. Chimpanzees will turn aggressive and have boundary patrols, so intruders have no chance to come close to the community (Watts & Mitani 2001). Here again aggression is the form of defending once territory. Other animals recognize territories through scent markings.

In contrast to territorial animals there are species that live on open space and home ranges such as the horse. They do not defend territories because the range is too big to do so. They live with more than one band in proximity to each other but there are also rules of how close bands can come to each other and with what kind of nonverbal signals this can occur. Dominant behaviour is not allowed when intruding another band. (McGreevy 2012)

When going to look at the human point of view there are remnants of territories in every aspect of life. The house for example is a territory of a family and status symbols distinctively mark the owner’s own territory. When entering someone’s house the person immediately when not being rude will take on a submissive position and ask for permission to do something. The house owner becomes the one with the power and shows this throughout the house with important things that give him even more status such as family pictures or expensive gadgets. (Morris 1994, 2002, Hall 1959)

When looking at a business there are also small territories of the people working there, it can be an office or even in an open floor plan a cubicle or desk which is the territory of a person.
Leadership Behaviour

working there. Personal belongings are placed on the desk and show that this is ones’ own territory. When someone is entering this personal space uninvited the owner will act defensively also when it is the leader/manager coming to the desk. (Morris 2002)

And even in everyday live, people like to have their own territory. When observing people on a train they do not sit next to each other if not necessary and using their headphones to close oneself off from the outside creating a territory that is not to be intruded rudely. Thus, for a leader knowing people have their own territory in the work place or everywhere in life and respecting this place with proper behaviour, can have a big impact on the interactions and effectiveness of leadership.

All these factors of territory and space can have a big effect on the relationship between leader and followers. Being aware of these various positions and reactions can make leadership communication more effective. Chapter six explores the main positions, gestures and facial expressions of humans, wolves, horses, and chimpanzees to find out just how subtle movements and awareness thereof can help become an even more effective leader.

Another leadership concept especially in the animal kingdom is the one of the right to breed. How mating behaviours influence leadership is discussed next.

4.3 Mating and sexual attractiveness

Animals often define their dominance over who gets to breed and ensures that their genes are given to the next generation. In horses for instance, only the stallion which can fight off other stallions and protect the herd gets to be the breeding partner of the mares in the band (McGreevy 2012). In wolf packs, only the alpha and sometimes beta wolves are breeding (Ellis & Sloan 2012, Mech & Boitani 2003, Packard 2010, Bush 2007). They are the most dominant animals in the pack and can give their traits to the next generation.

In humans the mating has become its own ritual as well and developed a complex system of how to attract and to keep a partner. Whereas animals form different forms of partnership. They can form either a lifelong commitment for a partner, a partner based on their traits of attractiveness and fighting ability or animals mate with several partners (Diamond 1992). The human relationships are far more complicated to assess. Humans also choose their partner in terms of attractiveness and whether he or she will be capable of taking care of the family but the emotional part in human relationships makes it more difficult. (Morris 2005)
How does this help in leadership behaviour? When looking at the roots of why we form relationships it is to secure our innate need to be able to give our genes to the next generation and ensure the species. Being an attractive leader makes it easier to get other people to follow (Goman 2011). The attractiveness however does not only come from the appearance but also from the emotional capabilities. Emotional capabilities are further explored in chapter eight.

There are many nonverbal cues that are used for sexual attractiveness. In the animal world this is often seen in fur and feather colours and sizes as well as distinctive courtship rituals such as dances. Chimpanzees display their readiness to mate to each other with their swollen, red genitals. The alpha male will approach females with a dominance display. Female chimpanzees mate usually with several males during their ovulation period. Mating displays of males are for instance sitting with open legs showing their erect penis. And females showing their swollen genitals by presenting their backs to the males. (Waal 1998, Mitani et al. 2012)

Humans also have distinct nonverbal courtship cues in order to attract a partner. The body of females and males are made to attract one another. Females developed big breasts and a more pronounced rear in order to be more attractive to the male. Males have their genitals always on the outside of the body which other species do not have. Apart from the physical characteristics, the human has developed a far more advanced and complex courtship behaviour than any other species. This is connected to the emotional bonds humans can have and maintain. (Morris 2002, 2005)

In leadership it is important to know these cues and know when it is suitable or not proper to use them. Leaders have the responsibility not to intimidate a follower with a sexual cue and make others feel uncomfortable. With a leadership role there is a certain amount of power the leader has over followers. It is often up to the societal norms and the leader how to handle sexual attractiveness and sexual behaviour.

In business situations it is not suitable to send out sexual cues in meetings, business deals and interacting with clients. While sometimes some use sexual behaviours to manipulate others in some countries, in the next people frown upon them and the leader must be aware of the differences when dealing for example with an international partner. Therefore, the knowledge of sexual nonverbal cues for leaders can be vital in having a positive relationship with co-workers and clients.
4.4 Alignment

Another concept within social behaviour and especially leadership behaviour is that of alignment. **Alignment** is an arrangement of someone or something in the correct relative position to each other. Why is alignment so important for leaders? It helps leaders be more in tune with the others around them and achieving their goals through a strategy more easily. (Irwin & Webber 1999) However, leadership research has not studied this concept in depth. It has been studied in human – animal relationships and especially in horse-human interactions. The findings presented in this chapter are merely a first attempt to show a significance for human leadership behaviour and how it can be interpreted for better communication skills.

The importance of alignment can be seen well when working with horses. There are several different methods of training horses in order to behave in a positive manner in regard to the humans need. The approaches of training horses have been developed through years and the most used are called classical training methods. But in the past forty years a new line of training techniques has been developed and is seen as nicer and more natural to the horse and its well-being. These methods are usually called natural horsemanship. One approach is about biomechanics, natural behaviour and then classical dressage. Why is this mentioned in the master theses about nonverbal communication? Because the whole concept of biomechanics and natural behaviour is based on alignment. In fact, how horses and wolves, chimpanzees and even humans are effectively communicating has its roots in alignment.

A leader can only lead when all the signals that he or she is sending are perfectly aligned with the person it is sending them to. In horse training that means getting to know how a horses’ body is moving. What kind of movements make the horse feel more relaxed, and which more excited or even angry? The way a classical trained person would lead a horse and someone that learned the technique of alignment are very different. For example, the classical trained person leads a horse around with taking the lead rope and start walking, when the horse is not moving the person pulls on the lead rope and then the horse moves or not, which leads to more pulling and the horse and the person get upset and frustrated with each other.

Why is there frustration? Firstly, the person was not in alignment with the horse and how a horse moves naturally. Secondly, the person would cause a reaction in the horse that would make it feel more stress rather than making the horse feel more comfortable with being led. McGreevy et al. (2009) describes this as the predator response in the horse which is activated when people give cues to the horse which can only be interpreted as a threat.
When leading a horse with alignment and knowledge of the biomechanics and natural communication, the leader would be aware of the horses’ body and know that a horse is not lead by its face but rather must be pushed from behind. Because the more dominant is pushing other horses around in space. The leader asks the horse to take a step forward from behind and lets the horse make the first step which makes the leader the more dominant one. Furthermore, it does not create stress in the horses’ face but more often relaxation because the horse and the leader are moving together in space how horses would be as well (McGreevy et al. 2009).

Translating this small example of leading a horse into the human context, lets us see how important it is to know how ones’ own body is moving and how other bodies react to movement. When sending out a nonverbal signal it must be aligned with the receiver, meaning that the sender has to be aware of what the other can understand and is able to interpret. For a leader this information is crucial when for instance working with a cross cultural team where the members have different expectations of body language because of their social context. Another misalignment of signals would be when the spoken word and the nonverbal signal like a gesture are not matching and the followers are not sure of what to think.

Alignment therefore plays a crucial role in leadership behaviour. A leader can enhance the communication process in a positive way when knowing what the follower’s needs are in respect to nonverbal communication. Furthermore, mimicry of nonverbal behaviours is also seen in relationships between leaders and followers. Mimicry can be seen as a sort of alignment with each other as well. When in a meeting during a decision-making process between three people and one is agreeing with the another and one is not, the agreeing parties might mimic the nonverbal cues of each other in order to strengthen their position together and aligning each other. (Swol & Drury-Grogan 2017)

Most mimicry is unconscious behaviour and done through natural responses. In fact, it is rooted in the evolutionary process of the human communication because of living in groups. Mimicry is seen as building relationships and affiliation with each other meaning that the importance of survival was dependent on people building relationships. (Lakin et al. 2003)

Alignment in the animal world is also a natural process. When talking about mimicry and alignment they are not the same thing however, mimicry could be a part of alignment. Alignment is a concept that supersedes mimicry in the sense that it is more positioning oneself in the desirable position a leader needs to lead the follower. Mimicry could be one part in
affiliating with the follower in order to gain more trust and then leading the way in a more harmonious one.

Another example was made by Goman (2011) that alignment can help with defusing an argument. When aligning with the opponent and standing or sitting shoulder to shoulder the argument can be defused. When squaring the shoulders and moving in the space of the other the argument could escalate. A fitting example of this are political debates, especially the presidential debates in the USA. When having the debates, the candidates are usually standing next to each other facing the panel and not facing each other. This is done purposefully so that the arguments get not too heated. But sometimes the participants position themselves square to each other and the argument gets heated, once facing the panel again, the atmosphere comes down.

This means that alignment can be used to position the leader in the true leadership position. With the knowledge of what the other needs to be led in a positive way and being able to empower others with aligning to their needs a leader is more effective. Also, with the example of a debate the person with knowledge of alignment can take this into their advantage and control the mood a situation can have with only aligning the nonverbal cues. On the other hand, misalignment can also be used as a tool to stir up some situations in order to move forward or discuss crucial things. Using it as a tool in either direction can help with leading other people.

Moreover, people are even more likely to notice things that are not aligned than the other way around. This can happen unconsciously when they just get a feeling that something is not right or consciously where they can point out that the mismatch happened. A mismatch can be between words and nonverbal communications used or even just in nonverbal communications that do not add up to the same message. (Goman 2011)

In the next three chapters I will go more in depth into nonverbal signals that are used during leadership behaviours such as dominance, submissive, territorial and space as well as mating behaviours in humans, horses, wolves and chimpanzees. Exploring how different species address leadership will help better understand what it takes to be aware of ones’ own nonverbal signals and learn if there are other approaches that can prove to be more effective in leadership.
Power and submissive behaviours are intertwined and regularly seen in leadership interactions. Having explored the meaning of power and status in the previous chapter and where they can be seen. I will now take a closer look what kind of postures, gestures and physical characteristics stand for power and submission.

5.1 Fight, flight and freeze

The concept of fight, flight or freeze is important to understand. Power and submission in the animal world are closely related to this concept. An animal will challenge someone with a dominance cue and the response will either be fight, flight or freeze. These are strategies in order to see where the animals are in the hierarchy. A dominant animal will fight in order to establish a hierarchy whereas a lower ranked animal will go away (flight) or freeze in order to not aggravate the more dominant. The same is also in the predator-prey relationship where prey will run away from a predator when attacking. To further the chances of survival, flight is essential. (Reece 2014)

A great example are our legs which are usually faster in responding to a threat than the thought process. Our legs and feet are vital in the fight, flight and freeze concept. (Goman 2011) Leg movement is therefore also a great indicator for power displays. A leader usually has both feet steady on the ground ready to go forward rather than just standing on one foot and leaning not being steady and not having a strong posture.

In horses, legs have a great meaning as well. As a prey animal the horse has a tendency to be uneven in the front and back. In order to be ready to move away fast. When having trust and being fully relaxed, the legs will square up and indicate that the horse is fully stopped and not wanting to move away. (McGreevy 2012)

The feet position itself has a message too. People engaging in a conversation point their feet towards each other. Feet pointing away indicate that people want to have a way out and are not very comfortable with the situation. (Reiman 2007) For leaders, feet therefore, can be a good sign where people focus on when interacting with others.

Chimpanzees legs and arm movements are used for fight, flight and freeze as well. An interesting concept of chimpanzee communication is that of seeking refuge with a more dominant individual. Often young will seek refuge by their mother when losing a fight, but also
adult chimpanzees will go and sit next to or behind the most dominant male in order to get rid of their attacker. Here the lower ranking individual uses the dominance dynamic to get away from the higher ranked individual. (Waal 1998)

Waal (1998) also describes the recruitment strategy of chimpanzees in order to get rid of the attacker. Once being attacked, the threatened chimpanzee can beg for another chimpanzee to help him with an open palm hand gesture and a fearful expression on his face. Once the third chimpanzee joins, the posture and gestures change dramatically into the same as the attackers by launching a counterattack. Then all chimpanzees will stand up, make their fur stand up as well and wave with their arms and scream at the attacker.

This behaviour of seeking refuge and looking for help by others is seen in human interactions. Leaders have a significant role in this concept. The leaders will help others by uniting them or giving others a safe place to be. This is also rooted in the need for collaboration which will be discussed in chapter eight.

5.2 Power signals

Postures, gestures, facial expressions, proxemics, and physical characteristics are power signals in humans and animals. Especially the last category has evolved highly in the human. Certain things such as clothes have become a status symbol and everybody within the culture understands these symbols without the need for an explanation.

5.2.1 Gestures

Powerful gestures that show authority are for example the steepling hand and palms down gestures (Goman 2011, Pease and Pease 2004, Reiman 2007). Political or company leaders use the steepling of the hand (Figure 3) during public speaking. Each finger will meet their counterpart of the opposite hand with or without the palms touching using different amounts of space between the palm. This gesture can be held up in front of the upper (Figure 4) or lower body with the finger tips facing upwards or away from the body. It can also be seen when sitting and the arms are resting on the table in front of the person or on their lap. It portrays confidence.
and superiority and is seen as a precision gesture. It occurs during problem thinking and indicates that the person who uses it is able to think through every aspect of the problem and find a solution. (Goman 2011, Pease and Pease 2004, Reiman 2007)

Variations of the steeple occur. The degree of the openness of the gesture also indicates different gradients of power. The more space between the palms the more power the person portrays. Furthermore, it is always a gesture between people who communicate and takes up much space. It should also be noted that it is most often used when in group conversation instead of in one on one conversation where this gesture might be a bit too dominant and space filling. Any gesture with the palms facing each other can be seen as a dominance gesture. (Goman 2011, Pease and Pease 2004, Reiman 2007)

Palms facing down or towards the audience are seen as dominance gestures too. These are gestures to control others by telling them either to settle down or stop with what they are doing. It gives the user of the gesture the attention they want and control over situations. (Goman 2011, Pease and Pease 2004, Reiman 2007)

Leaders should be aware of when to use these powerful hand gestures in order to not offend or insult their followers. A hands down gesture after for example an employee has told the leader something that worries him or her at work might make the employee feel belittled and not heard. Knowing when it is ok to use controlling gestures can help with miscommunication and empowering the followers. (Reiman 2007)

Moreover, sweeping gestures show dominance. When using the hands in a sweeping gesture towards the chest the sender of this message invites someone to come closer or draws the focus to him or herself controlling a situation again. Sweeping gestures away from the body means go away or the subject does not concern him or her. When using sweeping gestures with palms facing each other it shows how much it affects the sender – more space equals more impact. (Goman 2011, Pease and Pease 2004, Reiman 2007)

Hand gestures are highly evolved in the human. Only primates used hand gestures in the animal kingdom. Chimpanzees also use hand gestures for showing others whether they are more dominant. Dominant hand gestures of the chimpanzee are for instance waving and swaggering the arms as well as punches. (Goodall 2010)
When in a power display, chimpanzees use gestures such as slamming palms down on the ground, lifting sticks and stones or other objects and waving them around in the air as well as swaying movements of the arms in front of their body. (Waal 1998)

5.2.2 Postures

Postures of a leader are very important in order to be seen as strong and being able to secure valuable resources. Stallions when approaching each other will erect themselves by lifting their neck and tail up in order to appear bigger (Figure 5). The neck will curl and the rest of the back bringing the head in a vertical position and the stallion appears bigger. The ears are pointed forward or going in to the threat position slightly backwards, the tail is up and sticking straight out and can sweep from side to side as well. (Mills & Nankervis 1999, McGreevy 2012)

Wolves point their ears forward, stand up tall and can lift their fur up to appear bigger (Figure 6). Furthermore, the tail is a great indicator whether a wolf is portraying dominance. When the tail is level or above the pack it clearly shows dominance especially when paired with the pointed ears and standing tall. (Ellis & Sloan 2012, Cafazzo, Lazzaroni & Marshall-Pescini 2016)

Chimpanzees will get on their two hind legs and stand up in the vertical position to appear bigger and they also can raise their fur (Figure 7). Making the fur stand up is one of the most expressive behaviour of the chimpanzee. Furthermore, they will go into a swaying behaviour of their upper body to take in more space and appear bigger. (Waal 1998)

Humans still perform in these postures as well. They stand up tall use their arms and legs to appear bigger. For instance, someone has a X-shaped posture with the hands on the hips and the feet at least shoulder wide apart with the same weight on both feet (Figure 8). (Reiman 2007, Goman 2011)

Using these tall postures, indicates that the person can take up more space than the others and it is a sign of wanting to control others or intimidate them. Knowing that this stance makes
someone more dominant can have a big impact on the use of it within a leader and follower relationship. (Reiman 2007)

Raising the chin or tilting the head up is another sign of authority and power. It signals that someone is above the other and therefore indicating a higher rank (Reiman 2007). In horses a head flick can be seen when two horses interact with each other and one horse is flicking the other off with a head flick indicating it is superior (McGreevy 2012).

Cashden (1998) described how open body postures are seen as power signals too. It is however not clear whether the postures are more seen as an act of toughness or an act of relaxation accompanied by the high rank. They suggest that women show open postures as an act of toughness and power. Whether this applies for men could not be said. Even if it is a biproduct of a high rank open body postures can always indicate who is seen as a higher ranked individual. A leader can use open body posture to let others know who the higher ranked individual is or not use it to achieve a more equal environment in an interaction.

5.2.3 The face

Another interesting signal are flared nostrils and a nose crinkle. Humans, chimpanzees, and horses express both signals. In horses flared nostrils mean that the horse is alert and taking in scents of the surroundings. A crinkled nose in a horse can indicate several things as pain, an unfamiliar smell or heightened activity. (Mills & Nankervis 1999) Flared nostrils and nose crinkles in humans and chimpanzees are usually part of an emotional response. Flared nostrils are seen either when someone needs to take in more air after an activity or when they are angry. They also take in more air to get ready to attack and fight. (Reiman 2007)

The fight-flight response triggers a response when someone irritates somebody else. This can also be seen in chimpanzees when they get ready to fight. While flared nostrils and the anger response is not a sign of dominance, it is important to know these signals in order to not get caught in a fight. Since aggression is a way how animals sort out dominance. Also, when
knowing these responses, a leader can check their own body language when irritated and cool oneself down.

A crinkled nose is usually a sign of someone smelling something bad. This is related to the emotion of disgust and contempt. This can be a very powerful facial expression which can offend others when directed at them. Dealing with these emotions during interactions with others and toning them actively down can help in the communication process. (Reiman 2007)

The eyes are another indicator of a power signal. Especially in the animal world eyes are used to portray several meanings. The saying *if looks could kill* comes in mind when thinking about eye signals in the animal world. Often just a stare of a dominant animal will make the submissive one go away or stop a certain behaviour. Wolves for instance use staring on a regular basis to get messages across. It is not only the stare which will bring the message across rather the whole act of staring which includes the pointing of the ears forward and totally focusing at the other (Ellis & Sloan 2012, Bush 2007).

In a confrontation between two male chimpanzees while fighting over the alpha position, the chimpanzees are avoiding each other’s gaze purposely to not confront each other directly while circling before the actual fight. The intensity of the eyes at each other would escalate the situation more easily and the fight would occur faster and with more intensity. Most displays are just bluff displays and it is rare that it comes to a fight within a social group of chimpanzees. However, the threat of a fight is always present which makes for intense situations. (Waal 1998)

In humans the time that someone spends watching someone has to do with whether the person likes it and is interested in the other or their ideas. When looking in someone’s eyes it portrays confidence and that the person is at ease. Too long of eye contact or too less can indicate deception and finding the right amount is not easy but usually comes naturally to someone. Time spent not looking in the other’s eyes is usually used to gather one’s own thoughts in order to come up with the right responds and arguments. (Reiman 2007)

Morris (2002) describes eye contact in several ways. It is based on either of the three emotions of love, fear, or anger. Basic social interaction is another way when the three emotions do not trigger the eye contact. Anger is related to dominance, fear to submissive eye contact, while love is connected to sexual attractiveness and will be explored in chapter seven.

Eye contact connected to anger can either be expressed in passive or active dominance gazing. While passive dominance displays involve looking away purposefully in order to not seem too
aggressive. However, every slight shift in the mood can shift the passive gaze to the active one which entails an intense stare at the subordinate in order to show the full expression of anger and superiority. (Morris 2002)

Therefore, the knowledge of how eye contact is used can have a substantial impact on relationships. It is a predator trait which humans have inherited from their animal ancestors. Horses in contrast to the human do not have an intense stare also because of the position of the eyes. Horses will look at something that might scare them and look out in the distance with both eyes focused. However, the nature of a prey animal is to be alert to its surroundings and to keep an overall awareness of the situation. (Mills & Nankervis 1999, McGreevy 2012)

There is also a difference between women and men with eye contact. Women tend to make more use of eye contact than men. While women like to look in each other’s eyes, men are ok with looking into women’s eyes but do it much less with other men. Knowing the differences in gender can help finding the meaning when eye contact or the lack thereof is used in the right amount or as a deception. (Reiman 2007)

Furthermore, pupil dilation lets the other know if something he or she does is interesting to the person. Eyes are considered the first response to how a person is feeling and the pupil response is triggered by instinct. (Goman 2011)

To sum this part of the power signals up, hand gestures, postures, facial expressions as well as eye contact and pupil dilation, can let someone know how powerful oneself or someone else is. Links with the animal world can clearly be seen especially with the posture and eye contact as well as emotional responses. This dates back to the evolutionary process when the human in early stages was still behaving more like other animal species. The connections to the fight and flight response is still evident and modern life interactions are definitely impacted with the behaviours which stem from them.

5.3 Submissive behaviour

Having studied power signals, it is also important to have a look at submissive behaviours. Submissive behaviours are the counterpart of dominance signals and therefore, show how someone with certain cues wants to appease the more dominant in order to not start a fight.

Postures and Gestures
Head movements, postures, and tail signs show best the submissive behaviour in wolves. They go in a crouching position and the tail goes down and curls around their body. The ears are going flat and a sideways movement of the snout away from the more dominant animal indicates the submission (Figure 5). Furthermore, in extreme cases the dominant animal will stand over the submissive animal and touch it with a paw (Figure 9). The submissive animal will lay on its side and the tail curls between the legs and the ears go flat. The submissive animal will not look at the dominant animal. (Bush 2007, Ellis & Sloan 2012, Cafazzo, Lazzaroni & Marshall-Pescini 2016) Moreover, fleeing as well as avoidance of a situation or dominant approach with a submissive posture is seen as submissive behaviour as well. Approaching a dominant animal with a submissive posture and licking their snout is also seen as a submissive behaviour. (Cafazzo, Lazzaroni & Marshall-Pescini 2016)

![Figure 9 Submissive wolf laying on back with dominant wolf standing over and touching with paw (drawn by author)](image)

Human submissive behaviour consists also of postural and gestural behaviours as well as eye movement. Submissive postures of the human include crouching and making oneself smaller. The use of space decreases with a submissive posture. Therefore, gestures also become more toned down as well as looking at the ground and away from the more dominant. A fitting example is when a person sits in their chair with a crouched position, hands on the lap and not taking up a lot of space.

### 5.3.1 The face

Eye gazes connected to submissive behaviour is the one of fear. Morris (2002) describes them as passive submission, while intentionally looking away from the opponent. Active fear happens when the gaze is directly at the opponent, but with a fear expression on the face and not being able to take one’s eyes of the opponent because of being afraid of a strike.

Another important submissive behaviour which can be seen in horses and chimpanzees is the lip smacking as an appeasement behaviour (Mills & Nankervis 1999, McGreevy 2012, Goodall 2010). In foals this can be seen when approaching an older horse and greeting it indicating that the foal is submissive to the older horse (Figure 10) (McGreevy 2012, Mills & Nankervis 1999).
In chimpanzees this behaviour can be seen in greetings as well as appeasement behaviour (Goodall 2010, Waal 1998). It is connected to the grooming behaviour which is used as an appeasement gesture.

Humans do not use the lip smacking. The facial expression which has evolved in its place is the smile. Smiling is part of appeasement behaviour in humans and shows that a person is friendly to the other. (Reiman 2007, Morris 2002, Goman 2011, Pease and Pease, 2004)

5.3.2 Grooming

Mutual grooming in horses is used to strengthen relationships. Foals will nip at the mother or other foals to enact this behaviour. Mutual grooming can also be used as a show of who is more dominant. While a dominant can go to a subordinate to be groomed, the dominant can also choose to not act in grooming with subordinates and therefore not allowing social behaviour. This is a powerful tool of controlling how relationships are formed. (McGreevy 2012)

Grooming amongst chimpanzees is an important aspect of determining hierarchy and submission as well (Figure 11). Males groom each other more often than females do, and grooming is performed to strengthen coalitions. Higher ranked chimpanzees are groomed by their subordinates and they use it as a show of submissive behaviour. (Morris & Parker 2009)

Grooming can also be used between two rivals to ease the tension and showing of appeasement behaviour. This can help in not escalating behaviour of a fight, which is an advantage, so nobody gets injured. Grooming is the most important social behaviour in chimpanzees and says a lot more about their submissive and social behaviour. During grooming they use other
gestures and facial expressions such as lip smacking or hugs. Hugs and other caressing touches are the same as in humans and show how the social ranks are formed and solidified. (Morris & Parker 2009)

After a fight for instance the chimpanzee who has lost, is most often going to enact self-grooming because of the stress of the fight. Once another chimpanzee reaches out to the chimpanzee and gives him a hand gesture or hug this behaviour will be reduced. Indicating that a friendly approach of another chimpanzee can help reduce stress and have a soothing effect. (Morris & Parker 2009, Goodall 2010) After reconciliation of a conflict the self-grooming behaviour is not as often seen as when there is no reconciliation (Fraser, Stahl & Aureli 2010).

The concept of reconciliation after a fight or conflict ensures the stability of the social construct. Once two chimpanzees ended a fight they go and embrace themselves and give each other kisses. This behaviour ensures that the peace is found more easily and that the social group is not driven apart with fights. The reconciliation does not have to take part right after an altercation but can also occur several hours afterwards. Here it has to be noted that the fight is not over until reconciliating. (Fraser, Stahl & Aureli 2010, Fuentes et al. 2002, Waal 1998, Webb et al. 2014, Wittig & Boesch 2005)

Chimpanzees therefore, are not ending a fight by avoiding each other but by getting closer to each other and strengthening their bond with grooming after the reconciliation. Space is a crucial indicator for whether the fight is over and reconciled. The closer the individuals are the better the chance that the conflict is resolved with reconciliation. (Waal 1998, Fuentes et al. 2002)

Humans after fights express cooling off periods and reconciliation. The cooling off period occurs after the fight and often more space between the two who had a conflict is necessary in order to not engage in another fight. Only reconciliation can end a fight in humans too. Here the two individuals involved in a fight are coming together and usually talking it through. The actual act of grooming is of course not present anymore but has been replaced by verbal communication and maybe a few nonverbal gestures such as head nods, smiles and a hand shake. There can also be hugs after a reconciliation to symbolise that the two fighters are on good terms again. Leaders can use this knowledge of grooming and reconciliation behaviour in order to get through conflicts faster and more efficient.
Mediating

Another interesting aspect of chimpanzee social behaviour is the ability that a high ranked chimpanzee can help mediate between two lower ranked chimpanzees having a conflict. Some younger chimpanzees will only think about reconciliation after a higher ranked chimpanzee has mediated beforehand. (Waal 1998)

For a leader it is important to understand the different meanings of submissive behaviours. Whether they occur active or passive and which dominant behaviours of the leader has been the trigger of submissive behaviour. Being able to decipher the cues someone is giving with their dominant or submissive behaviour can make situations easier to understand. Moreover, the leader can help others to be more empowered when giving them encouragement at a moment when they really need it rather than putting them down with unintendedly dominant body language. Furthermore, mediating between two subordinates is something which makes a leader powerful as well. Having the ability to overcome conflict in other’s shows that the leader is able to create a safe environment and it gives the subordinates psychological resources and safety to go through everyday life.

5.4 Greetings

Greetings are a vital part of communication in animals as well as humans. Greetings not only show who is welcomed into a social group but can also show who is the more dominant and who is submissive. The subtle signs of the different greeting rituals can be traced back to animal and evolutionary roots. Greetings have evolved especially in the human into different rituals. These rituals are very diverse depending on the cultural background, but the animal past can be seen in several different greeting rituals. Greetings brings power and submission together.

5.4.1 Handshake

The most often used greeting ritual is by far the handshake (Figure 12). The handshake is not only seen in the human but also chimpanzees are using an extended arm and a shake of the hands to greet other chimpanzees. The reaching out with the arm and an open palm is the most
common seen gestures in Chimpanzees and is not only used for greetings but in general to invite others to come closer or also in begging for food or help (Figure 13).

The facial expression of the chimpanzee is an important indicator as well. The lips pulled back with showing of the teeth as well as open eyes is a fear expression and is used to show submission, while humans usually greet with a smiling expression which is a facial expression unique to the human. Chimpanzees only use the greeting with friends while humans use this form of greeting with almost everyone. (Waal 1998, Morris 2005, Reiman 2007)

With humans the duration and pressure of the handshake are more important than the ritual itself. The subtle signals of a firm and long handshake give more information than that somebody merely extends their hands to greet someone.

Leaders often use a firm handshake which does not take too long. The hand position during the handshake indicates different meanings. The hands can either be held parallel to each other showing that both are equal (Figure 12) or one hand on top of the other showing that the one with the hand on top is more superior (Figure 14). (Reiman 2007)

Other greeting forms of the handshake can be with extra hand contact at each other’s arm coming closer into each other’s personal space or a hand shake accompanied by a pad on the shoulder. Whoever is initiating these handshakes and taking the first step is most likely the more dominant. (Goman 2011, Pease and Pease 2004, Reiman 2007)

Chimpanzees indulge in similar greeting behaviours as humans. They hold hands, embrace, kiss and pat each other (Waal 1998, Goodall 2010, Luef & Pika 2017, Hobaiter & Byrne 2011). These greetings are seen between same ranked animals or a lower ranked chimpanzee being submissive to the higher ranked one. The greeting is seen as a reassurance of the dominance rank. Furthermore, the alpha male will receive the most greetings in the whole community. The ratio on how many submissive greetings are given to an individual is dependent on the rank. (Waal 1998)

This can also be seen in leaders when they greet a lot of people. A celebrity for example has to shake a lot of hands and fans want to greet the celebrity and being able to say that they met the
person. This says how relevant a greeting ritual still is in modern life. Showing respect to a higher ranked individual is not only seen in animals.

5.4.2 Bow

Another greeting ritual that can be seen in for example Japan is bowing to each other. Bowing is an indication of respect and the deeper the bow the more respect is shown. This also correlates with the findings of a more dominant being bigger and the submissive being smaller. (Morris 2002)

Bowing can also be seen when greeting a leader and the leader stays up right. Only the submissive one will bow down to show respect and submission (Figure 15). It is often seen when people pray to gods or approach a very high ranked or sacred person as well.

![Figure 15 Human Bowing as greeting or out of respect (drawn by author)](image)

The bow of respect and trust can also be seen when horses are communicating with each other or humans. When a horse is pushed around by a more dominant and accepts its lower rank the horse will bow in order to walk by the higher ranked horse, indicating that it is respecting the other’s rank and trusting its leadership. When working with horses there are a couple of different bows that can be seen. The horse can bow out of respect and trust which is indicated by the head dropping below its withers and staying level when coming up. Or just out of respect without the trust then the head will go also below the withers but comes up above the withers again. The bow therefore indicates whether a leader is worthy of their respect and trust. Only a leader that has both in the horse world will be a good leader. Bowing is not used for greeting however. (McGreevy 2012, Irwin 2005)

Bowing in greetings can also be seen in chimpanzees (Wall 1998, Luef & Pika 2017, Hobaiter & Byrne 2011). Here the submissive chimpanzee will bow often and in a fast pace to the more dominant one. There is usually not mutual bowing as seen in human behaviour.
5.4.3 Other greetings

Female chimpanzees greet the dominant male with the back towards the male exposing their sexual organs (Wall 1998, Luef & Pika 2017). This kind of greeting is something that most humans are not seeing as appropriate and tend to avoid these behaviours in public. However, chimpanzees also use this behaviour as submissive behaviour. And not only females but also males will use it to appease a dominant chimpanzee. (Wall 1998)

Wolf greetings are different from that of chimpanzees and humans. A wolf greeting another wolf will have its ears back, a wagging tail as well as licking of the mouth or snout (Figure 16). The general cues are friendly and meaning that the wolves are at ease. Greetings in wolves are also used as a submissive behaviour, where the submissive one will lick the dominants snout. (Cafazzo, Lazzaroni & Marshall-Pescini 2016)

![Figure 16 Wolf greeting: submissive wolf licking mouth of more dominant wolf (drawn by author)](image)

For a leader this means that studying different cultures can help with understanding how they greet each other and how subtle cues can help bring across the message which is intended. There is not only one right way to greet another but showing respect to differences and studying the meanings of different rituals can help in an intercultural interaction. Unintentional or intentional messages with a greeting can show dominance or submission. Leaders who have an understanding of the impact a greeting ritual has on the further communication with someone else can have an advantage on their hand.
6 TERRITORY & PROXEMICS

Territory as well as proxemics have been described earlier and now it is time to have a closer look at how displays of territory as well as proxemics look like. I also include tactile behaviour into this chapter because it has a lot to do with how close someone is able to get. In the next chapter about mating rituals, tactile behaviour will be seen as well.

6.1 Scent and smell

Scent and smell is very important for territorial behaviour. Scent markings in wolves for instance are accomplished through urination, defecation as well as rubbing on trees or stones. These scent markings are letting other wolves know where a territory begins. (Ellis & Sloan 2012, Peters & Mech 1975)

The alpha pair is usually the one who mark the territory the most, but it is also done by other wolves. The closer to the edge of the territory they get, the more marking takes place to let others know where the boundaries are. (White, Lewis & Murray 1996, Peters & Mech 1975) Furthermore, the frequency of scent markings during the breeding season increases throughout the whole territory. (Peters & Mech 1975)

Scent marking in horses is also done by stallions. They urinate over faeces of mares to show other stallions that the mare is taken or make big stud piles in order to show that the range or a path is taken. The piles are made by defecating over and over at the same spot. Stud piles are found on paths, overlapping ranges and in the centre of the range where the band is found most often. Usually the stud piles are not found on the edge of a home range. These piles are seen where intruding stallions would find them more easily. (King & Gurnell 2006)

The dung of mares is covered with urine by the stallion of the band. This is done to indicate to other stallions, that the mare is taken and should not be mated with or even be stolen from the band. If trying to do so, the stallion will be met with threats and a possible fight. (King & Gurnell 2006)

Humans use smell, scents, and body odours in daily life. Body odours from humans can evoke mixed feelings in other people. The natural scents of the body produced by glands are contributing to whether a person perceives another as attractive or not. Within the sweat different pheromones are signalling to others whether they are attracted to each other or not.
Therefore, body odours of one person can have a different effect on different people. One person can like somebody’s body odour while the next finds it repulsing. (Rikowski & Grammar 1999)

Odours are therefore, not easy to deal with and there is no certainty that everybody will like the same odour. It has more to do with mating behaviour than with territory. Nevertheless, body odour also lets others know when they enter a territory as well. When going into a room, odours will linger and state that the person was there. Therefore, humans usually neutralize or mask their body odours with scents.

The scents of perfumes and other scented items are used to make sure someone knows the territory is entered. Heavy perfumes can be smelled even when the person has left a room, but the scent stays indicating the person was just there. Also scent candles are used in a home to make it feel like one’s own. Often laundry detergents can also be specific to a person and can be taken as a personal scent. (Willander & Larsson 2007, Meng-Hsien, Cross & Childers 2018)

What does scent, and smell has to do with leadership behaviour? Like indicated before, scents are used in everyday life and can therefore also trigger memories of a person. When wearing perfume in the work place it can trigger emotions in someone else. This can be positive but also negative emotions when using strong perfumes. (Willander & Larsson 2007, Meng-Hsien, Cross & Childers 2018)

The perfume for instance could be a reminder of an unhappy relationship and thus the interaction with someone could be tinted from the start in a negative manner. Using more neutral scents or no scents at all can help with not triggering any emotions and leaves the interactants on neutral ground. (Reiman 2007, p.153)

6.2 Control of space
Territorial animals will use a great deal of force and aggressiveness to protect their territory. Chimpanzees are vicious in boundary patrols and will attack strangers who will often die of the wounds that have been inflicted to them (Goodall 2010; Mitani, Watts & Amsler 2010, Watts et al. 2006). Males go on boundary patrols and usually move quietly through the territory in a single file line. They move quite far and no feeding nor social behaviour is exhibited. The males communicate through nonverbal signals and not through sounds. Often, they also stop the patrol and smell the surroundings or listen for neighbouring chimpanzees. (Wilson and Wrangham 2003, Watts et al. 2006)
The willingness to participate as well as frequency of participation in boundary patrols according to Watts and Mitani (2001) has also influences on the mating success. The more often the males are going on boundary patrols the better the chances to mate. Therefore, it is the male’s protective behaviour and maintaining the food resources that gives them a higher rank with the females.

‘The use of space and touch creates and defines our relationships with other people: Who is in the inner circle, and who is not? Who can come close, and exactly how close? (Reiman 2007, p. 139) It is often seen that higher ranked people can move around in a full room more easily and that they can invade other’s personal space more easily (Carney, Hall & LeBeau 2005).

Leaders must know they have more power over the resource of space and the ability to come close to others. This however, does not always give them the right to invade someone’s privacy and make them feel uncomfortable. Leaders that understand the dance of where they are too far away or are too close will have the ability to let others know with subtle clues that they can lead them with respect to their own space.

Space is a powerful tool also in the animal world. Taking the horse for example, the lead mare or stallion use space as a tool for letting others know that they are the more dominant. In the horse world the one which is pushing the other around in space is the more dominant. Horses therefore, push each other forward from behind or push lower ranked individuals out of their space to make sure they have enough of it. In a band of horses, the higher ranked animals usually also have more space surrounding them when foraging or resting. Middle and lower ranked horses tend to have other horses more closely to them (McGreevy 2012).

The most impressive display of pushing others away from a band of horses is when a stallion is threatening and chasing another stallion away. The chasing stallion will lower its neck making its head more horizontal. The ears are pinned back to the neck and the tail is sticking out in an angel towards the ground (Figure 17). In a flying gallop the intruder will be chased away. This behaviour can also be observed when the stallion is herding his mares into safety and they need to move quickly. (Mills & Nankervis 1999, McGreevy 2012)

![Figure 17 Stallion chasing posture (drawn by author)](image)
In the wolf space differences between the pack members can often be seen in dominance displays. For instance, when starting to eat after a hunt, the more dominant animals get to eat first and have the most space around them while the others wait for their turn. Also, space invasions and tactile behaviour is seen in dominance displays such as the touch of a paw and standing above a submissive animal. (Mech & Boitani 2010)

Chimpanzees use space as well in dominance displays. When an alpha male for instance wants to make sure that a group of chimpanzees is behaving he will drive the other chimpanzees together in a smaller place which can also be high up on a tree and will move around screaming and standing up tall to make sure that the others know that he controls the space around them and they cannot move unless he allows it. Furthermore, other males in the group are not seen close to the females or alpha males. Often the alpha male makes sure that the lower ranked male which is also in breeding age is away from the group. (Waal 1998)

Furthermore, it has been described by Mitani and Amsler (2003) that male chimpanzees can form sub-groups within a colony. These subgroups can be formed through rank while the higher ranked individuals and the lower ranked individuals are in two separate subgroups. These subgroups still share the same territory, but they are more likely to be closer to individuals in their own sub group than the other males. Aggression between the subgroups is often not seen within the groups more aggressive displays can be observed. The rank within the subgroup is just as important as the overall rank.

Leaders in business have the same tactics as the animals. They also use space to their advantage and show their control of the resource. They take up space by standing or sitting up tall, moving around during a presentation, and claiming more space or putting things on a table during a meeting showing, they own this space. Furthermore, they also use tactile behaviour in order to make sure the other knows who is in charge. Gestures indicating pushing behaviours towards another person and touching them on an arm or back to literally move them in the right direction are all seen as dominance displays. (Reiman 2007, Goman 2011, Pease & Pease 2004)

Another aspect of territory and space is how it is used such as in a meeting room. Here many people come together and share a space for a while, but the nonverbal communication of the leader is vital for the possible outcome of the meeting. It does matter where a leader is sitting around the table especially when it is not a round table. Even when having a round table the position towards the door is another essential aspect. Not only where someone is sitting is important but also how this person is sitting.
To get a better understanding of what is meant by the relationship between where someone sits and the possible outcome of the meeting Reiman (2007) and Goman (2011) as well as Pease and Pease (2004) described that an authoritarian leader will sit at the head of the table which is also the most common seating arrangement today. This position at the table shows the leader as the most prominent but also can have the effect that people might resent the leader a bit. When sitting in the middle of the long side it is still a dominant position especially when facing the door. Though, it creates a more collaborative approach the leader is still in the middle of the attention and can assure to see everyone. Having the door in sight gives the leader more power. However, having any other seat around the table will give a true collaborative workspace and makes the leader more part of the group and sets the tone for equality within the meeting. This does not mean that the leader is weak, it just means that he or she is also capable of giving some control to the others.

Depending on the content of the meeting and the context it is in it can clearly be chosen which type of seating arrangement is the best. Even when just sitting down with one person it is important to know that chairs next to each other or around a corner are more collaborative than facing each other. This leads to a confrontational setting even when not intended. (Reiman 2007, Goman 2011, Pease & Pease 2004)

The posture around the table or while siting is another aspect of leadership behaviour. Whether taking up a lot of space or staying just in the seat and also giving space to the others is another strategy (Figure 18). Humans when taking up more space will make themselves bigger with stretching out limbs and claiming a piece of the table with a glass of water, some papers and a cell phone for instance.

![Figure 18 Dominance (left) vs. submissive (right) sitting posture using different amount of space (drawn by author)](image_url)

The influence of territorial and special behaviour of the past still effect daily interactions in personal and professional situations. Awareness of such behaviours can help the leader to make the right decisions when approaching someone’s personal space. In business situations the knowledge of seating arrangements can help further interactions and even solve problems.
7 MATING & SEXUAL ATTRACTIVENESS

Mating and sexual attractiveness are two important power displays in the animal world and in humans. Whereas certain mating behaviours are socially not accepted to perform in public and business places, remnants of certain behaviours can still be seen and are used on a regular basis. It is also often a taboo topic in a lot of businesses and there are plenty of rules and regulations to for come sexual harassment. Therefore, it is interesting to see why sexual behaviours are often seen in a leadership dynamic and where these behaviours come from.

7.1 Mating behaviours

There are mating behaviours to attract a partner and mate as well as mating behaviours which are used as a dominance display. Mating behaviours in general are a power display and often males in the animal world have evolved in their physical attractiveness as well as their mating rituals. In the world of survival of the fittest as Darwin described the evolution of life, only the fittest in the mating rituals are eligible for breeding and their genetic material will continue to live in its offspring. (Reece 2014)

Mating rituals in the animal world can be impressive. Especially in birds we can see males with vibrant colours and outrages feathers to impress the females, like the peacock. Not only the physical appearance but also the dances that a lot of couples will perform in order to gain the interest for each other can be quite lengthy and seen in a lot of animals.

7.1.1 Mating rituals

A stallion gets the right to breed when he has secured the safety of the band and displayed his dominance. Mares when in heat will lift their tail and pulsate their vulva to indicate that they are ready for breeding. Pheromones and scent are also very important in this process to attract the stallion. The mare will also go hindquarters first to the stallion in order to be bred. (Figure 19) Stallions will dance around the mare with a round and high neck to display his attractiveness. Mares can also portray a stallion like behaviour and when greeting face to face the mare and the stallion can give out a scream and then they will continue their dance around each other. Once the mare allows his presence in her personal space, the stallion will mount the mare and goes on with the copulation behaviour. (McGreevy 2012, Mills & Nankervis 1999)

The mating behaviour of the wolf is usually within the pair bond of the alpha male and female. In bigger packs it is also seen that the alpha male copulates with more than one female and
sometimes a second breeding pair is present. Mating behaviours include the rubbing of the body underneath the other’s head, laying the head or a paw on top of the other’s back, presenting each other’s back side as well as sniffing the fur and the genital regions (Figure 20). For the mating the male will mount the female. The females also go with an exposed back to the male and present her genitals to the male to sniff. (Derix et al. 1993)

Other males in the pack are not allowed to breed and are met with dominance displays or aggressive threats. Females within the pack also show aggression to each other. Especially the alpha female will threat other females and interfere in the mating behaviour with the alpha male or other males. (Derix et al. 1993)

Chimpanzee females are copulated by several males after each other once it is ready to breed. Females will present their swollen genitals to the males and walk around them. Usually, there are only a few males that want to have the breeding rights to one female, but it is sometimes seen that a male will fight off other males and take one female for himself. Then the female will enter persuaded or forced in a consort-ship with this male. (Goodall 2010, Watts 2015)

Sometimes older females can be seen as more attractive by the males than younger more nervous once. This shows that experience in being a mother and being less stressed and more stable is a positive aspect. (Goodall 2010)

The higher ranked males do often not allow lowest ranked males to copulate with females. Their solution to this problem is they go on secret dates with the females, so the higher ranked males will not notice. The courtship begins with the display of the erect penis to the female. The female will show her swollen genitals and after a few glances to each other they will go behind some bushes or trees to copulate. Furthermore, when higher ranked males glance over at the displays early on, the lower ranked males will close their legs or drop their hands in front of their genitals to hide their sexual display. All these sexual signals are not considered as socially
acceptable from the higher ranked males nevertheless it is happening, and the lower ranked chimpanzees have developed many behaviours to hide their first behaviour. (Waal 1998, Watts 2015)

In the chimpanzee community there can also be male aggression and coercion of females. This includes forcing, harassing or intimidating females to have sexual relations. Though it has not been found that this is related to the rank of the males, it is still present in their natural behaviour pattern especially when several males are present and want to breed. (Stumpf & Boesch 2010, Watts 2015)

7.1.2 Mating behaviours as a display of dominance
But mating behaviours have also been used by animals to dominate each other because of evolution and survival of the fittest. These behaviours can be seen in wolves when the more dominant is jumping on the more submissive one and simulate copulating behaviour in order to intimidate the submissive one. Female and male wolves can perform this behaviour. (Ellis & Sloan 2012, Mech & Boitani 2010)

This phenomenon can also be seen in the bachelor groups of young stallions. During play and establishing a hierarchy within the group, young stallions mount each other to establish dominance. This behaviour is clearly a mating behaviour which is used only to dominate the younger stallions. (Zharkikh & Andersen 2009) Young mares can also indulge in this behaviour when playing and learning who is higher or lower ranked. (McGreevy 2012)

Chimpanzees can use this behaviour as well while the submissive one will present its rear to the more dominant one as a sign of appeasement. This does not have to be only a female but also males can take on the role as a pseudo female. The dominant then can go and mount the submissive one in order to end the ritual. This behaviour is seen so conflicts will not escalate in fights. (Morris 1994, Mitani 2010)

The female mating behaviour is therefore, seen as a submissive one and the male as the dominant one. When taking this into consideration, looking at the human sexual behaviour is quite interesting.

7.1.3 Human mating behaviours
Sexual behaviours in human include eye contact, certain postures as well as complex rituals. The human mating behaviour has evolved through time and is a very lengthy process when seeking a mate to live with. It starts with dates and casual conversations over a period and
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going to a more intimate level that involves kissing and touching each other. It does not have to come to actual copulation in quite some time. Furthermore, humans have sex on a more regular basis than other animals and using it not for breeding alone but for pleasure and ensuring that the pair bond is strong. (Morris 2005, 1994, Diamond 1993)

Furthermore, sexual displays vary in intensity when scaling from the first flirting gazes to the copulating behaviour. The closer sexual behaviour comes to the copulating behaviour the more it is seen as an obscene behaviour or even forbidden in public. When a behaviour becomes obscene differs also in cultures and social groups. (Morris 2002, 2005)

Eye movements connected to sexual behaviour are the first indicators that someone finds another more attractive than others. When finding someone intriguing the gaze will be just a little longer when the person passes by. When being on a first date the eye movement is more away from the other person and meaning that the person is not sure yet, whether to trust the situation, but also intrigued. Further in dating there comes a faze when the couple cannot keep the eyes off each other. After a while the gazing behaviour will be more regular and will go back to the normal social interaction, some moments however still have the effect of wanting to look at the other the whole time. (Morris 2002)

Furthermore, flirting behaviour can have a considerable influence on how things are received in the workplace. Lip gestures are very flirtatious and because the form of the lips is unique to human it is interesting to look at some lip gestures (Reiman 2007). Kissing for instance is the most obvious mating behaviour someone can see. Chimpanzees also give kisses to chimpanzees they are close with and want to strengthen their bond with (Waal 1998).

Lip licking as well as lip biting can mean different things. Lip biting is more a response to nervousness this can either be a sign that someone is nervous in the presence of someone else the reason being attractiveness or lying. Flirting behaviour includes lip licking. Wetting the lips draws an attention to them and indicates that someone is interested in the other. (Reiman 2007)

In fact, sexual behaviours are often a taboo topic and it is often frowned upon to talk about or to address it. Forcing or harassment of sexual behaviour as seen in chimpanzees is not taken as acceptable in most cultures of human behaviour. However, sexual behaviour has a huge impact on the social interactions and how social behaviours are formed. (Morris 1994, 2002)

Status within mating rituals and sexual behaviour are the size and colour of the sexual organs. Many apes and monkeys as well as the chimpanzee have bright coloured patches around their
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genitals or the genitals themselves become red when erected. In humans this phenomenon can be seen as well. Because it is a taboo topic most of the sexual behaviours have evolved into symbols that humans use as a power display.

These symbols include cars, houses, make up and clothing as well as things that have a phallic shape or a rounded shape. This seems a bit far-fetched, but the symbols give the owner a certain status and the shape of the item is related to the shape of the phallic shape of the penis or the rounded shape of the buttock of the female. Cars and especially sports cars have a phallic form and are built to go forward fast just like a thrust. The most popular colour even is red and a male sitting in a red sportscar is seen as very attractive in many societies. (Morris 1994)

This behaviour of surrounding oneself with status symbols can often be seen by leaders as well. Especially, company leaders have the reputation of owning many cars, mansions and many more symbols. The bigger the better and showing it off is another function of the sexual behaviour. In animals, the presenting of the genitals when erect and swollen is the indication that they are ready to breed but it can also be seen when displaying dominance. (Mitani 2010, Waal 1998, Morris 1994, Diamond 1993)

Bringing human and animal behaviour together the link of mating behaviour in animals especially the dominance of male behaviour over female behaviour can still be seen in today’s human behaviour. Although the behaviour has evolved more into symbols and complex displays of nonverbal behaviour the roots are still in the need to find a partner and mate.

7.2 Attractiveness

Physical attractiveness has a prominent role in the animal kingdom to attract a suitable partner but also to display dominance. Physical attractiveness is always viewed from the eye of the beholder but certain social standards within a social group say what is attractive and what is not. These rules are understood by everyone within a group but can of course differ from individual to individual.

This can also be traced back to the animals. Alpha wolves for instance can have more distinct fur markings especially in the face region to see which is the most dominant within a pack. The fur markings can be seen in both the male and female alpha wolves. (Ellis & Sloan 2012) In horses the breeding stallions usually develop a fuller and longer mane and tail to look more impressive and interesting to the females as well as having more muscle mass. Also, the females have a long mane (McGreevy 2012).
Chimpanzee males when being the alpha male seem to be bigger and more impressive than the lower ranking males. This is accomplished by letting the fur stand up and move slowly and heavily around. The alpha male will always want to look bigger than the other males but, other males can be bigger just the impressiveness of the fur standing up makes them seem bigger than the rest of the chimpanzees. Females are usually smaller and for physical attractiveness, the size of the swollen genitals when ready to breed are the most attractive to the male. (Waal 1998)

Also, physical attractiveness still plays a prominent role in the human behaviour. Physical attractiveness in animals has evolved into colourful displays and in the human, it is no different. Not only a strong physique but also how someone looks and is able to portray themselves has a significant impact in the success of finding a partner. Relating this to leadership behaviour in the workplace it can clearly be seen that physical attractiveness has an impact on how a leader is perceived. The social standards on how someone should dress and look like and seen as powerful have an influence on the appearance. It could even be that some leaders are followed because they are able to look a certain way which is desired by the followers.

Humans have developed several standards for attractiveness and this does not only include the physical attractiveness which is given from birth, but which can also be changed daily through clothing, make-up, and accessories. (Morris 2005)

The beauty standard in societies is different but everywhere it is seen and portrayed on a regular basis. Fashion magazines, beauty products and campaigns on body images are normal in society. The big industries are giving the standards and from early on in life a certain beauty standard is learned. Striving to get as close as possible to this standard makes people buy the products and change their appearance. This can be linked to the inner need of finding a partner and produce offspring. The behaviour around this phenomenon is complex and cannot be discussed completely in this thesis. But it is important to know that the roots of such behaviour lie in the basic need of wanting to mate. (Sekayi 2003)

Therefore, physical attractiveness in business interactions should be considered as well as in leadership behaviour. Women will highlight their sexuality with the help of clothing, hair styles, make-up, lipstick, and jewellery. Lipstick for instance highlights the lips and accentuate the colour especially when using a bright red. This is used to show to males that they are attractive and ready to meet someone. Furthermore, clothing and jewellery are also used to highlight certain areas of the body. Showing off cleavage and highlighting it with a necklace which is hanging just in the right place to focus the gaze on the breast. In addition, tight pants or a skirt
can also accentuate the round buttock to show the attractiveness. (Hill, Donovan & Koyana 2005)

Certain dress codes in businesses are made in order to tone down the sexual attractiveness and for some inappropriate reactions and behaviours. Leaders should always be aware of how they dress and use the physical characteristics when interacting with followers. The environment and occasion of a certain situation also play a significant role in the decision what is proper to wear. This differs between social groups and should be considered when entering one which is different from the own. Gurung et al. (2017, 2018) described that there is a correlation between perceived power and competence with the way a woman is dressed in the workplace. Too many buttons undone of a blouse made women seem less competent and not of a high status. This means that in certain social groups too much sexual behaviour can lead to seeing someone as unprofessional. The societal rules of a dress code have a significant impact on how a woman is perceived.

Male attractiveness plays as much as a role as women attractiveness. They also use clothing to show off their masculinity and availability. Males clothing however, is usually not as revealing as the female clothes.

Leaders which are aware of the impact of mating and sexual behaviours and understand what is socially acceptable will have an advantage in portraying a confident leader and are able to understand when it is proper and when it is not suitable to use sexual behaviour.
8 BEYOND THE ANIMALS

To be able to fully understand the implications of nonverbal cues in leadership behaviour which are rooted in animal communication and have evolved throughout history, additional factors have to be considered. In this study, emotional intelligence (EI) will be discussed shortly to emphasise some implications. EI was chosen because it is an important part of human leadership behaviour. It is however just a glimpse into the implications of the connection to give a broader perspective.

8.1 Emotional intelligence

Therefore, a brief review of recent studies of EI is important to understand the implications later described. In recent studies EI is seen as the more important aspect of being a leader than just the intelligence quotient (IQ). While IQ is obviously important as well, EI gets a more prominent position within leadership. The tendency nowadays goes to more warm and empathetic leaders that also can be assertive and have influence. (Bennis 2009, Bennis & Nanus 2005, Goman 2011)

In the animal world EI does not exist it is a uniquely human trait. There are studies about empathy in animals which show that animals have feelings as well (Bekhoff 2007), but the ability to rationalize about EI is uniquely human. In the animal world, a leader must be able to gain the followers trust and respect otherwise it would not be the leader. There is not a leader that has the trust but not the respect or vice versa. When a leader just has respect it usually becomes a tyrant and these leaders are quickly overthrown by more powerful leaders. In chimpanzees this phenomenon can be seen when a tyrant leader is overthrown by a coalition of three or more strong males which then after the tyrant is gone will decide through fight which one will be the next leader (Mitani 2010, Waal 1998).

Animals need to be able to trust and respect their leader because it is about their life or death. They need to trust them that they ensure their safety and that there are enough resources always. For humans, however, the concept of EI is quite important because leaders especially in the workplace do not have the traditional role of physical safety and resources but the psychological one. The leader must be able to provide a workplace which is safe and stable in the psychological aspect. Therefore, EI has become more important in today’s leadership.
According to Salovey and Mayer (1990, p. 189) emotional intelligence is ‘the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions.’

Nonverbal communication has a big impact on EI. It is not only what is said and how it is said, but it is about how other people feel about it and if the leader can make the followers feel empowered, respected and trusted. Nonverbal communication helps in making the follower feel the right thing. (George 2000)

Groves (2005) found ‘that leaders with greater social control skills, including self-presentation and social role-playing abilities, were more likely to be perceived as charismatic by their followers.’ (p.273) Meaning that EI in a leader has a positive impact on the followers’ perception, also including the nonverbal cues.

8.2 Collaboration

People like to work together and to work in cooperation. This goes back to the evolution of human beings and the animal world. It has to do with being able to survive. So, collaborating on tasks and getting work done is as normal for humans as well as for chimpanzees, wolves, and horses. In humans this means that we are constantly thinking about what others think and feel. What their response is and if we feel safe. Having respect for each other and giving thanks to others make us feel fulfilled and satisfy an intrinsic need for collaboration. This is what makes humans a social being and it is important to understand that this need can have a positive impact on leadership as well. (Goman 2011)

Leaders who are aware of the power of collaboration can take their nonverbal communication and help people with satisfying their need and even getting the things done faster and easier. It can have a positive impact on the mind.

8.3 Emotions

Mind and body are connected in how reactions are triggered. Especially when it comes to the seven basic emotions. It is proven that even when faking a smile, it can make a person happier. This is called facial feedback. The facial expression will affect the persons’ emotions and thus the whole body and mind. But it is not only the facial expressions that can trigger a change in feelings also positions and postures can have this effect (Hanna 2010). When standing for a while in a power pose, the nervous system will move towards the feeling of being empowered even when not in a true power position.
The negative perception of someone else of a leader can influence other peoples’ behaviour that are still deciding whether to follow or not. This is a triangular relationship of nonverbal communication which must be taken into consideration. (Haumer & Donsbach 2009)

When training horses there is the saying that ‘the frame of the body is also the frame of the mind’ (Irwin 2008, p. 82) which means however the body of the horse is shaped, it reflects how the horse is feeling. When working with horses this knowledge can be taken as an advantage and will help the horse when it is stressed, nervous or fearful in shaping its body into a more relaxed position. This can of course not happen with force or resistance but when understanding the biomechanics, the process can be accomplished. Knowing this can work with horses, leaders can also use this for themselves or their followers. In understanding that the frame of the body can affect the frame of the mind leaders can shape their own bodies into a more proper position for example to resolve a conflict or help a follower with stress management. Here, the concept of alignment can have an impact.

8.4 Emotional Contagion

The last important aspect about EI that I would like to discuss is the fact of emotional contagion. It fits to the previously mentioned aspect that frame of body is frame of mind in the fact that one’s own frame of mind can have an influence on the group he or she is being with. When one member is sad or depressed, the whole team can be affected by the negative nonverbal signals without even knowing it. (Goman 2011, George 2000) As a leader it can help knowing that ones’ own mood or the mood of the team can be influenced by just one or two persons. Checking the own emotions before entering an important meeting or social interaction and scanning if others are giving off negative vibes can make some interactions easier to understand. This can of course also go into the other direction when someone is very happy this can be contagious as well.

Emotional intelligence therefore plays a key role in how the leader is working with the nonverbal communication. Furthermore, the knowledge which was generated with this study about the connection of nonverbal communication with animals will be processed with the emotional intelligence of the leader.
9 CONCLUSION

Having discussed the most important leadership behaviours in respect to animals and humans in the previous chapters it is now time to have some final conclusions on how these three topics interact. Power and submission behaviours, territory, and space as well as mating and attractiveness are well intertwined in leadership behaviour both in animals and humans. It is interesting to see how dominance displays in animals are more aggressive and direct and in humans they go into various levels and usually do not end in physical altercations.

This study’s aim was to give an answer to the question: *In what way is nonverbal communication in leaders still connected to the animal roots and what are the consequences of this behaviour in modern life?* Arguments showed a link between the three main topics of animal behaviour, nonverbal communication, and leadership behaviour. Evolution connects the three topics and helps understand why leader behave in certain situations like they do. However, evolution also helped the human to overcome the primal needs and with the help of emotional intelligence.

9.1 Primal acts

The evolved brain functions help to bring leadership behaviour into a more civilized way. But in times of war for instance also the human goes back to physical attacks and these are the biggest displays of leadership behaviours we can see nowadays which are the closest to animal behaviour. The territorial behaviour of chimpanzees is probably the closest example of the war analogy that I have drawn.

In these situations, leaders can tell other people to go out and destroy the enemy with every force necessary. The identification of the individual is lost, and the followers are seen as a unit fighting another unit. This abstraction of the enemy is necessary for the individual to justify one’s action in killing another individual that he or she has never met before.

This example shows how powerful leaders can be and leaders which portray that much power do so as much with their words as with their nonverbal communication. Everything that is said and done is in perfect synchrony and gives the follower the illusion that it is ok to act like the leader is asking them to do. However, it is not only the leader but also the situation the followers find themselves in. The leader makes use of an uncertain situation and makes the follower believe that in following the leader the change will be more safe than going through the process alone.
9.2 Co-leadership

The leadership behaviour in businesses or in emerging leaders in small groups is far less primal than that of a war leader. Still the roots can be seen in how the leader uses its nonverbal communication in interactions with others to get certain messages across and steer situations in the right direction. In the modern world it is often talked about different leadership styles such as transformational or transactional leaders they all have in common that they are aware of how they act around and how their actions influence others.

A leadership concept of animals is the one of co-leadership. This is a point we can learn from the animals. Chimpanzees can have a shared leadership of two strong males. Whereas one oversees the defending and power displays, the other keeps order and has usually more respect and trust than the other. (Waal 1998)

In fact, horses and wolves usually have both an alpha male and female. They have separate roles and lead the band or pack together. In human societies this phenomenon of co-leading is not often seen. There are of course groups and companies that have two leaders, but most instances have one CEO or president or another leader that stands above all. Even in democracies there is usually one elected that has the highest title. This is a point we can learn more from that animals naturally have co-leaders with different tasks but still leading together and having the same authority.

9.3 Impact of emotional intelligence

Emotional intelligence helps with answering the second part of the question more in depth. The consequence in modern life has to do with the fact that we can be aware of our nonverbal communication and adapt to certain situations. Furthermore, leaders in the human world have a more profound role as securing the psychological well-being of the follower rather than just the physical well-being like in the animal world. The psychological health relates to emotional intelligence in the sense that we can have empathy and can think situations through various perspectives.

In being able to connect with others through feelings and rethink how we act around each other the implications of the behaviours rooted in animal behaviour is essential information to have. It can clarify certain situations such as why we feel uncomfortable when somebody is too close or using a lot of space. It can also regulate the expectations certain individuals have when interacting with a leader or the leader interacting with the followers.
Conclusion

Seeing that there is a shift in leadership behaviour in the modern world from dominance to more emotional and psychological leaders, the natural ability of women to perceive more things can help with this style of leadership. Looking at the animal roots, they also give an indication why until now a lot of men were in power positions. Men are very good at portraying dominance and the nonverbal communication that coincides with it. Male nonverbal communication was associated with dominance and female with submissive behaviour. This does not mean that females are not capable of showing dominance which was also described earlier, but it shows why it was easier for men to gain the power that they are in. The shift in the leadership behaviour which is happening to more EI and topics such as work-life balance, the power displays are not as effective anymore. The psychological well-being of followers is also important.

When observing animals, they can therefore, teach us how to be a natural leader because we portray some of the same behaviours. Sometimes it is good to look at the straightforward behaviours of animals than the complex interactions that we as human create. What do I mean with this? Because animals are not using words and their world evolves more around the means to stay alive and breed rather than have a work life balance and complicated emotional relationships, the simpler way of looking at things and why they occur can put things into perspective.

This does not mean that a situation gets solved or fully understood but it can give a starting point or a different alternative. Nevertheless, the complexity of the phenomenon of nonverbal communication is fascinating to look at from all different kind of angles and can only tried to be understood when considering also emotional intelligence and verbal communication that coincide with it.

9.4 Practical implications

Moreover, consequences of these shared behaviour patterns in nonverbal communication can also be the positive aspect of communication workshops with the help of animals. There are many business coaches that use a horse, dog, or another animal to further communication skills. Having seen that subtle cues can have a substantial impact and have a great meaning to other individuals it is interesting to use animals which only communicate with nonverbal cues in order to teach more awareness.

It is also being said that most animals and especially horses and dogs are mirroring behaviour which the coaches then use to interpret the situation. What the animals do is looking at who is the more dominant individual and will act accordingly to the human that is interacting with it.
Conclusion

They will take on either a more dominant role or submissive role depending on how convincing the humans’ nonverbal cues are. Even when the human has never worked with an animal before, the domesticated animals will at least understand some cues and then act on them.

Here one question arises to me whether it is fair to the psychological well-being of these animals that the coach as a leader is using them to gain more insight into other individuals. Using an animal as a tool has to be considered carefully and whether it is psychological and physically stable enough to handle the work.

9.5 Added value

This study gives an insight into the topic from the perspective of the three animals and the human behaviour. The literature which has been used was critically chosen. The study provides a different angle on leadership behaviour and questions whether the nonverbal communication is really that different of animals as we thought. Furthermore, this study has to be seen as a case study and generalisations for other animals cannot be made. The connection of nonverbal behaviour of animals and human can however be generalised. The findings give an insight into the social and leadership behaviours and where they come from which is rooted in all humans.

Further studies deriving from these different topics can be to observe more closely how nonverbal communication is impacting the leadership behaviour on a deeper level. Looking at certain behaviours and going back to the evolutionary roots has helped clarify why leaders behave like they do. This type of study can be done with other animals as well as with other behaviours which have not been discussed deeply in this study. Furthermore, complex group dynamics with a leader and the impact of nonverbal communication can be discussed in a greater way. Moreover, the concept of alignment within leadership behaviour is certainly another aspect which should be investigated to find its role and impact in leadership. Lastly, the second part of the research question should be analysed in more depth to get a better understanding of the impact of the findings.

Overall, this study has given an overview and insight into the topic of nonverbal communication in leaders not only in humans but also in animals. Going back to the roots and seeing beyond the words, which can obscure how people really feel, has helped become more aware of why people act like they do in certain situations. Learning that humans are still driven by basic needs and physiological urges and being connected to the animal world also lets us see that we are not so different then we sometimes think.

Seeing Beyond Words
Ronja Wagenknecht
9.6 Closing remarks

For me this process of going back to animal behaviours has been really enlightening. The thoughts addressed in this study have given me a better understanding of nonverbal communication and how to understand it better. While working on this study I began to see nonverbal cues and being more aware of their meaning. It even has helped me clarify certain situations I have been in. I hope that this thesis inspires others as well to see beyond the words and learn from animals how to be a leader just like they helped me become a better one.
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