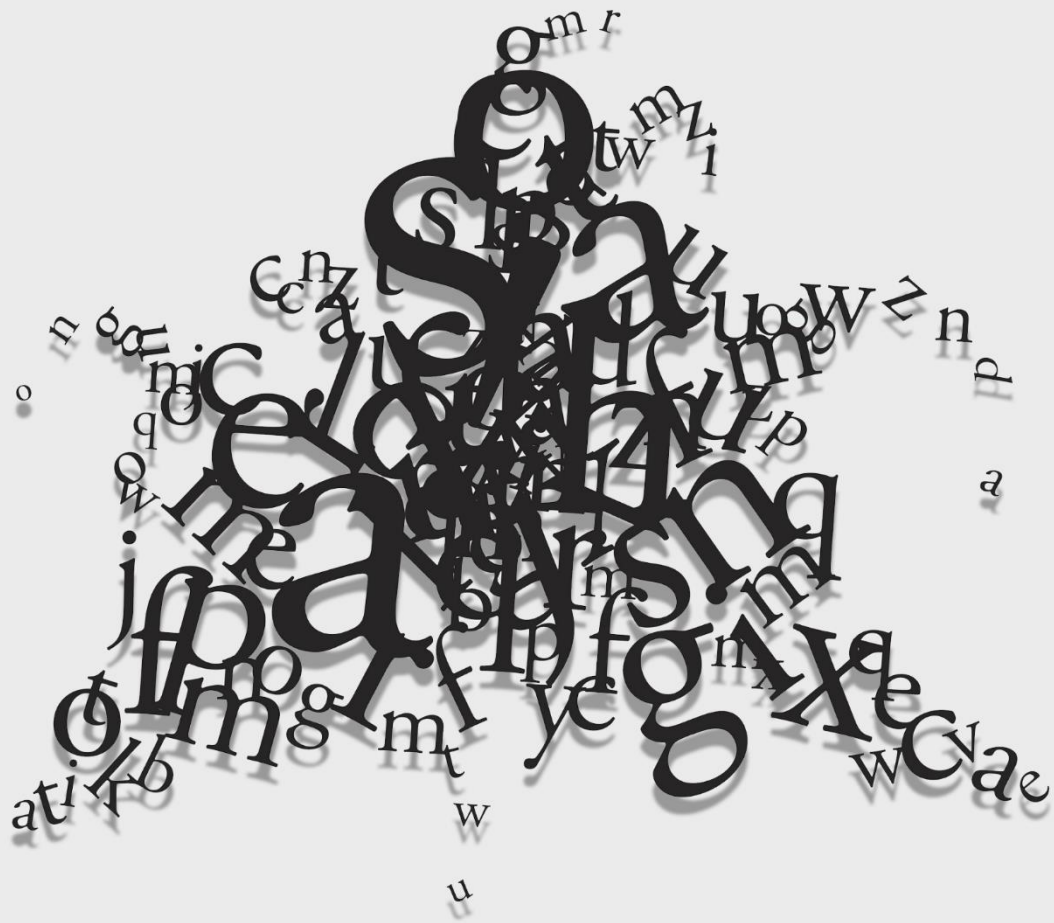


A linguistic perspective on leadership effectiveness

The role of word-use and verbal mimicry in perceived leadership effectiveness

An explorative study



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The role of word-choice and verbal mimicry on leadership effectiveness

An explorative study

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“Leadership is a language game, one that many do not know they are playing.”

Fairhurst & Sarr (1996)

Abstract

Numerous facets of effective leadership has been explored for decades. However, not many studies have taken into account the influence of specific verbal behavior on effective leadership. This empirical study explores if the word-use of leaders and the verbal mimicry between leaders and followers are connected to perceptions of leadership effectiveness. In a multi-method observational study, the word-use (attentional focus, emotional tone, cognitive complexity and powerless markers) and verbal mimicry of 52 managers, who work in a Dutch public-service organization, are analyzed with a quantitative content analysis. There are six hypotheses constructed based on an extensive literature review. None of the hypotheses are supported. However, contrary to previous findings, there was a negative significant effect of the use of first-person pronoun plural and words of affiliation on the perceived leadership effectiveness in this study. In addition to the hypothesis testing, an explorative test was conducted for both word-use and verbal mimicry in order to exploit the data-set. An explorative analysis was executed to explore whether there is a difference in verbal behavior between the five most effective and five least effective leaders. The five most effective leaders used more words bigger than six letters and the least effective leaders used more positive words and had more non-fluencies in their speaking. Since there was no relation found between verbal mimicry and perceived leadership effectiveness, the relation between verbal mimicry and trust, a vital aspect of perceived leadership effectiveness, was explored and a significant effect of verbal mimicry on trust (both cognitive and affective) was found. Implications for theory and practice are discussed, along with recommendations for future research.

Keywords: *Effective leadership, verbal leadership behavior, leadership communication, leadership behavior, meetings, word-use, verbal mimicry, linguistic style matching, LIWC*

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1. Introduction

Organizational scholars have aimed to decompose the artistry of effective communication since the primary way by which individuals exert leadership is through communication (Penley & Hawkins, 1985). Communication distinguishes leaders who are successful and effective from those who are not (Bass, 1990). Effective leadership is of crucial importance since it could enhance competitive advantage in the organizational landscape (Khan & Anjum, 2013). Therefore, organizational scholars demand further research regarding the impact of a leaders' communication on organizational associated outcomes like leadership effectiveness (Bellou & Gkorezis, 2016; Gardner & Avolio, 1998).

The complete communicative process is regulated by the combined nonverbal and verbal behaviors (Kendon, 2004; Maricchiolo, Livi, Bonaiuto, & Gnisci, 2011). However, few have attempted to operationalize the specific verbal behaviors effective leaders use in their daily transactions with their followers (De Vries, Bakker-Pieper, & Oostenveld, 2009). This study identifies and explains the role of verbal behavior on perceived leadership effectiveness. In specific (1) the word use of a leader and (2) the verbal mimicry between leaders and followers.

One example of a verbal behavior is language and more specific word-use. Words are the essential components that make up our language. They can give a glimpse of our attentional focus, our feelings, our thoughts, and how individuals organize and analyze our existence (Pennebaker, 2008). A leader can consciously and unconsciously adopt a language style that helps followers to establish an impression and/or attitudes towards the leader (Govman, 1959). Even subtle choices of leaders' words or hesitations can have a prompt and powerful effect on follower's perception (Holtgraves, 2001). Hence, an in-depth study of the word-use of a leader can be of great value.

Another phenomenon in verbal behavior is verbal mimicry (Meyer, Burtscher, Jonas, Feese, Arnrich, Tröster & Schermuly, 2016). According to Bernieri and Rosenthal (1991), people converge and diverge imitate verbal style elements of another person based on the quality of the relationship (Pickering & Garrod, 2004). In other words, persons who like each other generate similar (i.e matching) verbal styles across various dimensions of verbal style (Giles, Coupland, & Coupland, 1991). The literature indicates that mimicry is an essential feature of interaction and leadership (Meyer et al, 2016). However, there a few organizational studies that

link verbal mimicry with leadership effectiveness. Studying accommodation in verbal style thus provides an unobtrusive window into the nature of the relationship between leaders and followers, and the factors influencing interpersonal communications that occur outside of an individual's awareness.

Furthermore, organizational scholars request studies that connect objective observation methods with methods that measure perceptions of leadership (Hoozeboom & Wilderom, 2015). Word-use and verbal mimicry can both be objectively measured through LIWC (a text-analysis software program). The few studies that have covered verbal behavior adopted an experimental research design and measures perceptions of participants, limiting the external validity of the research. Thus, a field study where natural language is observed can yield interesting results and increase the external validity. A significant part of the communication between leader and followers occurs in staff meetings, where also perceptions of leadership effectiveness are formed (Perkins, 2009). Therefore, the field setting of this study is organizational staff meetings.

The present study

This study will explore verbal behavior (word-use and verbal mimicry) in relation to leadership effectiveness, given the gaps in the literature. The purpose of this study is to gain insights in the extent to which verbal behaviors contribute to leadership effectiveness and therewith contribute to the literature on effective leader behaviors. Specifically, it is explored if specific words have an influence on the perceived effectiveness of leaders and whether there is a relationship between verbal mimicry and leadership effectiveness. Given the current situation, the relevance of this subject and the gaps in the literature, the established research question is as follows: *To what extent do word-use (attentional focus, emotional tone, cognitive complexity and power words) and verbal mimicry influence perceived leadership effectiveness?*

This question will be approached through a quantitative content analysis. Unique to this research is the natural language setting (field setting); a (videotaped) staff meeting rather than an experimental design. These staff meetings are transcribed and with this data, a quantitative content analysis is executed with help of the text analysis program Linguistic Inquiry Word Count to identify the verbal behaviors. This thesis is structured in the following way: First, the concept of leadership effectiveness will be discussed. Then, the phenomena of verbal behavior is elaborated on. The hypotheses of the current research will then be presented, and subsequently

the method of this study. Next, the results of the present study are discussed. As a conclusion, implications for theory and practice are presented.

2. Theoretical framework

In this literature review, necessary background information about leadership effectiveness is given. Additionally the verbal behaviors: word-use and verbal mimicry will be discussed based on existing literature and studies that were conducted previously.

2.1 Effective leadership

Effective leadership is of vital importance in attaining organizational success and team effectiveness (Zaccaro, Rittman, & Marks, 2001). A leader can be characterized as an individual that guides a group of individuals and is responsible for their performance (Zaccaro et al., 2001). Leaders can affect the performance of a team by his capability to influence his followers (Day & Antonakis, 2012). Effective leadership influences team dynamics and can help to establish a united team. Chemers (2001, p.1) noted that ‘Leadership is not a coercive process, it involves obtaining and utilizing the assistance of other people’. Furthermore, effective leadership increases the awareness of joint objectives and is therefore valuable for organizational prosperity (Irving & Longbotham, 2007). Therefore, it can be concluded that effective leadership is a crucial factor in order to strive in the organizational competition (Khan & Anjum, 2013).

The importance of effective leadership is widely reckoned by many organizational scholars, however, the definition of effective leadership is still quite ambiguous. Riggio (2016) stated that there are multiple different definitions of effective leadership however many have the same components. He defined leadership as “the ability to move collectives toward the attainment of goals” (Riggio, 2016, p.3). The MLQ, an acclaimed instrument to measure leadership effectiveness, gives an overview of leadership effectiveness. The MLQ perceives leadership effectiveness as (1) the leader’s capacity to lead the team effectively, (2) the leader’s capacity to please the work-related requirements of his followers, (3) the leader’s capacity to contribute to and meet the organizational goals; and (4) the leader’s capacity to represent the team’s interests in higher hierarchal levels (Kolesnikova & Mykletun, 2012; Avolio & Bass, 1995).

2.1.1 Effective leadership and behavior

Apart from the importance and the definition of effective leadership, it is also important to explore which elements affect the effectiveness of a leader. There have been

multiple paradigms concerning the elements that influence leadership effectiveness. The first paradigm connected effective leadership to specific traits (Judge, Piccolo, & Kosalka, 2009). In other words, effectiveness is related to certain genetic characteristics (Galton, 1980). Nevertheless, multiple scholars criticized this paradigm and suggested that the behavior of leaders influences effective leadership (DeRue, Nahrgang, Wellman, & Humphrey, 2011). Recent studies provided evidence that indicates that both the traits and the behavior of a leader explain his effectiveness (DeRue et al, 2011; Piccolo, Bono, Heinitz, Rowold, Duehr, & Judge, 2012). However, DeRue and colleagues noted that behavior explains more variance than traits concerning effective leadership (DeRue et al, 2011). In essence, the effectiveness of a leader is explained to a certain degree on the behavior the leader exhibits (Yukl, 2012). These findings emphasize the importance of behavior and suggest that the identification of effective leadership behavior can add to theoretical and practical intends.

The perception of leadership effectiveness is formed by means of the communicative behavior that a leader presents (Whitaker, Whitaker, & Lumpa, 2009). A leader can have good intentions regarding his followers, however, if a leader does not display his intention by way of his behavior, their perception can be in contrary with the leader's intention (Otara, 2011). According to Penley and Hawkins (1985), communicative behavior is the primary means by which leaders display leadership. In other words, "leadership is enacted through communication" (Barge, 1994, p.21). The interplay between leader and followers occur through nonverbal and verbal behavior (Darioly & Schmid Mast, 2014). The nonverbal and verbal behaviors collectively determine the communicative progress (Kendon, 2004; Maricchiolo, Livi, Bonaiuto, & Gnisci, 2011). Frequently, a substantial share of these behaviors occurs during meetings in organizations. Poel and colleagues (2008) stress the importance of verbal- and non-verbal leadership behaviors in meetings considering that the behavior of leaders in meetings affects the attitudes of followers. As a result, their perception of effectiveness can be shaped (Allen, Lehmann-Willenbrock, & Rogelberg, 2015). Thus, it can be of value to identify which behaviors in meetings affect effective leadership.

2.2 Verbal behavior

Nevertheless, few have pursued to operationalize particular verbal behaviors that leaders display in their interactions with their followers (De Vries, Bakker-Pieper, & Oostenveld, 2009). In this study, verbal behavior is explored through a scope of linguistics¹ and more specifically through the specific word-use of a leader. Language unveils contextually-thick and semantically-rich social processes that allow scholars to apprehend the complexity of day-to-day life (Haste, Jones, & Monroe, 2015). According to Pennebaker (2008), language is one of the most reliable strategies that individuals use to translate their emotions and thoughts into a structure that other individuals can decipher. One way of analyzing language is through the study of word use. Words are the essential components that make up our language. They can give a glimpse of our attentional focus, our feelings, our thoughts, and how we organize and analyze our existence (Pennebaker, 2008). In addition, Gleser and colleagues (1959) yielded evidence that word choice is stable within a very short time frame (approx. 5 minutes).

In this study, four-word categories are selected that can identify individual differences in leaders. Three of these categories are identified by Pennebaker (2015): (1) the attentional focus, (2) emotional tone and (3) cognitive complexity. In addition, this study will also include (4) powerful and powerless language (O'Barr, 1984) as a separate category. Literature lacks studies with a direct relationship between these categories and effective leadership. The next part of the theoretical framework will introduce the relevance of these categories in relation to effective leadership.

2.2.1 Attentional Focus: Personal pronouns

An individual's attention fluctuates between his internal world and his external environment (Pennebaker, 2003). Capturing someone's attention can expose information regarding their priorities, motives, and thoughts (Pennebaker, 2003). According to Pennebaker (2003), personal pronouns can reveal our attentional focus in social settings. Personal pronouns are words that refer to living beings without naming them. They can expose how someone ascribes those in interactions and those who are not in it. LIWC identifies four different personal pronouns (first person singular, first person plural,

¹ Study of language

second person singular, and second person plural). Various scholars have researched the impact of first person singular (I) and of first-person plural (We, us, our).

The use of 'I' is related to individuals that are more self-orientated, and the use of 'We' is more connected with individuals that are more collective-orientated. According to Davis and Brock (1975), there is a connection between self-attention and a lower status (Duval & Wicklund, 1972) and between collective-orientated and higher status (Sexton & Helmreich, 2000). In other words, individuals that use more we in their language are often individuals with a higher status that are more collectively orientated. Considering that leaders are often in higher status position, it is expected that in this study the leaders will also use more we. In a different study, the use of I and We were identified as exclusive (I) and inclusive (We) leader language. Leaders that utilize inclusive leader language place less emphasis on hierarchal boundaries and underline the importance of the collective. Sequentially, this can promote team performance because it encourages followers to engage in non-mandatory behaviors (e.g. voice). In addition, Ellemers and colleagues (2004) argue that the leader's ability to communicate a perception of a joint identity determines among other things a followers' attitude and motivation (Ellemers, De Gilder, & Haslam, 2004). For instance, politicians that use more we in their communication have a higher chance to flourish in an elective because they create a perception of a joint identity (Steffens & Haslam, 2013). In addition, individuals that use more first person plural have a higher chance to enter leadership positions, to be supported and to be reinstated if they keep using first person plural language (Steffens & Haslam, 2013). However, first-person plural ("we") has not been found to be related to higher relationship quality (Gonzales, Hancock, & Pennebaker, 2010). Team performance, follower's attitudes, and shared identity are determinants that might influence leadership effectiveness. Thus, we presume that leaders that use more first person plural (we, us, our) in their language have a higher leadership effectiveness score.

H1: Leaders who use more 1st personal pronoun plural (we, us, our) in their language are perceived as more effective than leaders who use less 1st person pronoun plural (we, us, our) in their language.

2.2.2 Emotional tone: Positive and Negative Emotions

The extent to which individuals ‘express emotion, how they express emotion and the valence of that emotion can tell us how individuals experience the world’ (Pennebaker, 2008). Previous studies showed that LIWC is an accurate method to analyze emotionality in verbal utterances (Pennebaker, 2008). For instance, people tend to use words of tenderness and positive emotion (e.g., love, nice, sweet) in case of positive experiences. Whereas humans experience negative events, they tend to use more negative emotional words (e.g., hurt, ugly nasty).

Leaders require disciplined self-management to prevent the outburst of negative emotional displays and gain the benefits of positive emotional expressions. Findings of a field experiment by Avey and colleagues (2011) showed that a positive attitude of the leaders increases the follower's performance and perception of positivity. A study of Norman and colleagues (2010) showed a positive relation between leader positivity and perceptions of leadership effectiveness and trust in the leader. In line with these results, various other leadership scholars accentuated the importance of a leader's positive emotional displays because of its inspirational and motivational effect. Therefore in this study, it is anticipated that expression of positive words is related to effective leadership.

H2: Leaders who use more positive words and words of affiliation in their language are perceived as more effective than leaders who use less positive words and words of affiliation in their language.

The literature suggests that negative emotional displays could have a negative impact on the follower's perception concerning leadership credibility and leadership effectiveness. Furthermore, previous studies underline the destructive impact of negative emotional displays. Expressions of negative emotional displays could impact the follower's emotional state and motivation. According to Kirckpatrick and Locke (1991), follower's link particular emotional displays to undesirable traits and they judge those emotional displays in accordance with the leader's social role. For instance, when a leader expresses sadness he has a higher chance to be perceived as missing self-confidence. Yet, self-confidence is a trait that is usually connected with effective leadership. The literature

is more ambiguous in regards to the expression of anger. Some studies suggest that anger is connected with powerful leadership (Bass, 1990), whereas other studies suggest that anger signifies a lack of emotion control (Goleman, 1998). In a study by Goleman (1998), a lack of emotional control was persistently connected to leadership ineffectiveness. Thus, we suspect in this study that the displays of negative emotions are related to leadership ineffectiveness because it may suggest a shortage of emotional control and an absence of self-confidence.

H3: Leaders who use more negative words in their language are perceived as less effective than leaders who use less negative words in their language.

2.2.3 Cognitive complexity

Language can give a glimpse of how individuals process information to make sense of their surroundings (Tausczik & Pennebaker, 2010). This process can vary in depth and complexity. This depth can differ between individuals and circumstances (Tausczik & Pennebaker, 2010). According to Pennebaker (2003), the complexity of individual thoughts can be echoed in their word-choice. Cognitive complexity entails the abundance of two elements of reasoning: the degree an individual differentiates between challenging solutions and the degree an individual integrates these solutions (Tetlock, 1981). These elements are captured in LIWC through the words: conjunctions, prepositions, cognitive mechanisms and words greater than 6 letters.

It is suggested by Dobosh (2015), that leaders who are more cognitively complex are able to communicate more effectively with their team and this grants them to be more influential for their followers. Hence, it is presumed that cognitively complex words also influence leadership effectiveness.

H4: Leaders who use more cognitive complex words in their language are perceived as more effective than leaders who use less cognitive complex words.

2.2.4 Power(less) language

A specific language style was identified that decreases the perception of credibility, trustworthiness, and attractiveness of the individual that is speaking (Erickson, Lind, Johnson & O'Barr, 1978). According to (Blankenship & Craig) powerful language is a specific style of talk that lacks specific markers that diminish the perception of power in an individual. These markers are non-verbal hesitations, verbal hesitations, fillers, formality, tag questions, tentative words, and intensifiers (Blankenship & Craig, 2007; Blankenship & Holtgraves, 2005). However, LIWC identifies only three of these markers: (1) Non-fluencies (verbal hesitations + fillers), and (2) tentative language. Thus, these markers will be analyzed in this study.

Non-fluencies are acknowledged as a verbal indicator of anxiety and a lower self-esteem (Johnson, 1985; Francis, 1979). Accordingly in a study, listeners perceived speakers as less confident when they used a verbal hesitation before an answer in contrast to when speakers preceded it with a silence. Furthermore, various scholars have shown that non-fluencies create negative perceptions. Non-fluencies affect the perception of competence and dynamism (McCroskey & Mehrley, 1969; Miller & Hewgill, 1964; Sereno & Hawkins, 1967). Hosman and Wright II (1987) also noted that individuals who use fewer hesitations are perceived as more authoritative and attractive. Considering that self-confidence and competence are key variables of leadership effectiveness (House & Shamir, 1993), we predict that verbal hesitations also negatively influence leadership effectiveness. Individuals that use tentative language use words that signify uncertainty and words that soften the intensity of statements (O'Barr, 1982). Scholars discovered that tentative language led to more negative perceptions of the speaker compared to speakers that were not tentative (Blankenship & Holtgraves, 2005; Hosman & Siltanen, 2006). According to Lind & O'Barr (1979) individuals that use tentative language were perceived as less attractive and less credible. Hence, it is presumed that tentative language negatively affects leadership effectiveness.

H5: Leaders who use more powerless words are perceived as less effective than leaders who use less powerless words.

2.3. Verbal mimicry

In the first part of the theoretical framework, the focus was primarily on the verbal behavior of the leader. In the next part, the verbal behavior of leaders and followers during their interaction will be explored. Mimicry is a social phenomenon in which individuals unconsciously regulate the timing and content of their behavior in such a way that they mirror the behavior that is displayed by the individual they are interacting with (Chartrand & Bargh, 1999; LaFrance, 1982). This phenomenon is also called the chameleon effect: ‘‘the nonconscious mimicry of the postures, mannerisms, facial expressions, and other behaviors of one’s interaction partners’’ (Chartrand & Bargh, 1999, p. 893). Mimicry also appears in our verbal behavior, varying from mimicry of accent, pitch and speech rate to word-choice (Bock, 1986; Pickering & Garrod, 2004; Ward & Litman, 2007; Reitter et al., 2011). In this study, the focus is on the mimicry of words.

2.3.2 Linguistic style matching

One way of measuring verbal mimicry is through linguistic style matching (LSM). LSM entails: ‘‘the degree to which two people in a conversation subtly match each other’s speaking style’’ (Ireland, Slatcher, Eastwick, Scissors, Finkel, & Pennebaker, 2011, p.39). The assumption of LSM is that mimicry lies in words that capture style instead of content. Words that capture linguistic style are function words. Function words (i.e. style words) are words that have little meaning of their own, especially outside the context of a sentence (Chung & Pennebaker, 2007). Therefore, when individuals speak or grasp language the function words are processed very quickly and to a great extent non-consciously (Segalowitz & Lane, 2004; Van Petten & Kutas, 1991). The focus on function words rather than content words allows scholars to determine psychological matching without regard of context. Function words are strong signs of individual diversity, fluctuating from leadership style to honesty (Tausczik & Pennebaker, 2010).

Table 1 - Style (function) words

Style words	Examples
<i>Personal pronouns</i>	Ik, wij, jij, zij
<i>Articles</i>	De, het, een
<i>Prepositions</i>	Op, naar, van
<i>Auxiliary verbs</i>	Moeten, willen, kunnen
<i>Adverbs</i>	Heel, zeer, nogal
<i>Conjunctions</i>	Mits, tenzij, nadat
<i>Negations</i>	Nee, nooit, niet
<i>Quantifiers</i>	Veel, weinig
<i>Assent</i>	Ja, oke, goed

2.3.1 The emergence of verbal mimicry

Scholars identified multiple determinants that influence the degree of mimicking between individuals. Based on the literature, we predict that followers that mimic linguistically also rate the effectiveness of the leader higher. To make this hypothesis, we deduce among other things on the Communication Accommodation Theory (CAT). CAT is a comprehensive framework that predicts and explains the alterations individuals make in their behavior in order to increase, maintain, or decrease social separation in an interaction. An individual who wants to decrease social separation modifies their behavior in order to become more similar to an interaction partner (Giles & Smith, 1979). In other words, the individuals mimic their interaction partner. According to this theory, individuals mimic their behaviors to advocate social approval. An essential indicator of CAT is that accommodative behavior like mimicry is linked to positive evaluations of the interaction, the individual and the relationship (Soliz & Giles, 2014).

Independent of CAT, multiple scholars have also embarked on the creation of verbal mimicry. According to Ireland and colleagues (2001), verbal mimicry arises when individuals approach similar psychological conditions. The unconscious motive for mimicry lies in the need for approval, affiliation, and interpersonal resemblance (Soliz & Giles, 2014). Furthermore, mimicry and social status are also connected with each other. An individual that is lower in status will mimic the individual with a higher status in

order to get approval (Gonzales et al, 2010). Therefore, in this study, we expect that a follower will mimic the leader. There are also studies that analyze verbal mimicry in an organization setting. In earlier organizational research the links between synchronized communication and team effectiveness (Kozlowski & Ilgen, 2006) was shown. Along these lines, it is assumed that followers that rate their leaders as more effective will also mimic them more.

H6: There is a positive relationship between verbal mimicry and leadership effectiveness.

2.4 Current research and hypotheses

In the present research, multiple specific verbal behaviors and their influence on perceived leadership effectiveness of experts and followers are investigated. The literature determined which specific verbal behaviors are included and examined in relation to leadership effectiveness. In particular, the choice of verbal behaviors is guided by the ability to measure them with the text-analysis program LIWC. Figure 1 presents a graphical representation of the hypotheses and in Table 2 an overview of all the hypotheses are given.

Table 2 - Hypotheses

H1	<i>Leaders who use more 1st personal pronoun plural (we, us, our) in their language are perceived as more effective than leaders who use less 1st person pronoun plural (we, us, our) in their language.</i>
H2	<i>Leaders who use more positive words and words of affiliation in their language are perceived as more effective than leaders who use less positive words and words of affiliation in their language.</i>
H3	<i>Leaders who use more negative words in their language are perceived as less effective than leaders who use less negative words in their language.</i>
H4	<i>Leaders who use more cognitive complex words in their language are perceived as more effective than leaders who use less cognitive complex words.</i>
H5	<i>Leaders who use more powerless words are perceived as less effective than leaders who use less powerless words.</i>
H6	<i>There is a positive relationship between verbal mimicry and leadership effectiveness.</i>

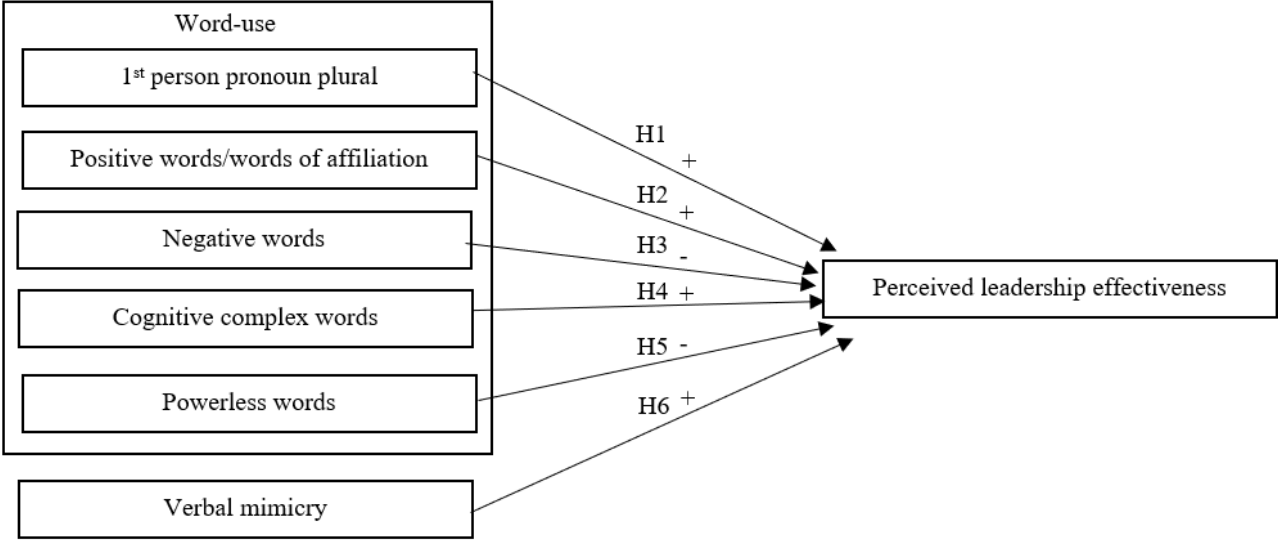


Figure 1 - Hypotheses model

3. Method

In this section, the research design, the sample, the procedure and the different measures of this study will be discussed.

3.1 Research Design

The present study contains a cross-sectional design, which has three data sources: (1) expert scores of leadership effectiveness, (2) a survey that measures followers' perceptions of leadership effectiveness, (3) a quantitative content analysis of transcripts to quantify the verbal behavior leaders and followers during regular staff meetings. Because of the diversity of methods and sources, common method bias and common source bias was minimized (Podsakoff, MacKenzie, & Podsakoff, 2012).

3.2 Sample

The sample exists of 52 leaders who are employed in a Dutch public-service organization, which operates nationally. The 37 males and 13 females were on average 51 years of age (ranging from 27 to 62: $SD = 7.88$). The follower sample consisted of 589 followers: 339 males and 208 females, 42 followers did not fill in their gender and 64 followers did not fill in their age. Their average age was 49 years ($SD = 10.71$).

3.3 Procedure

This current study analyzes transcripts of videotaped staff meetings of 52 work teams. Prior to each meeting the camera was located at a fixed position in the meeting room and directed at the leader; this way it developed quickly as a "normal" aspect of the background (Erickson, 1992; Foster & Cone, 1980).

In this study there is controlled for reactivity assumptions. The followers had to state their perceptions on the behavior of the leader: "to what extent do you find the behavior of your leader during the videotaped meeting to be representative in comparison with non-videotaped meetings?" They had to answer on a Likert scale: 1 (not representative) to 7 (highly representative). The average score was 5,69 ($SD = 1.20$), indicating that the leader's behaviors were representative.

The present study analyses a sub-sample (52 leaders) that originates from the complete sample (109 leaders), that is collected from a Dutch public-service organization. The sub-sample was selected based upon the audio quality. This approach ensures the selection of able videos to transcribe the verbal behavior of leaders and minimizes ambiguity during the transcription process. A team of student-assistants helped to transcribe the 98 hours of transcriptions. Before the students-assistants began they had to read a manual (See Appendix III) that described the transcribing protocol. In this manual, a description of all the codes and rules are given. To ensure accuracy, a random sample was investigated (5% of the data), which explored correct identification of the language of the leaders and the correct use of the protocol codes.

This quality check determined that the raw data was not yet sufficient enough for immediate text analyses. The accuracy of the output data is determined by the quality of the text samples themselves. That is why it was decided to correct all of the transcripts manually. To clean up our data we followed the steps from Pennebaker (2007). To ensure that the transcript is accessible for the text analysis the transcripts were converted into separate text files (.txt) for each follower and leader with the help of R. This made it possible to analyze the data for each follower and leader separately. An example of a transcript of this study is added in Appendix II.

Correlation, regression analysis, and an independent sample T-Test were then executed between the verbal behavior categories and the leadership of both followers and experts. In this study, educational level and age are control factors since multiple studies pointed out that those factors might impact the perception of leadership effectiveness (Bell, Rvanniekerk, & Nel, 2015; Liden, Stilwell, & Ferris, 1996).

3.4 Measures

3.4.1 Word-use

In order to measure the word-use of leaders, the text-analysis software LIWC was utilized. LIWC (Linguistic Inquiry and Word Count) is a text-analysis program developed by social psychologist James Pennebaker (Pennebaker et al., 2003). The dictionary was translated in Dutch and validated (Zijlstra, Meerveld, Middendorp, & Pennebaker, 2005). A dictionary refers to the collection of words (so both content or

style words or both) that define a particular category. Across the 80 categories, several language dimensions are straightforward. Other dimensions are more subjective. Groups of three judges then independently rated whether each word candidate was appropriate to the overall word category. The dictionary sorts Dutch words into categories with psychological meaning. The txt. files are the input for the program and measures the percentages of various word categories in the transcripts. In this study, four main categories will be used (1) attentional focus, (2) emotional tone, (3) cognitive complexity, (4) power(less) related words. Attentional focus entails the use of pronouns. Cognitive words are words that tap active thinking. Affective category attempts to capture words that express emotion (positive, negative and affiliation). Power(full) words are words that influence the perception of power. In Table 3, a summary of these categories and their variables are shown. In Appendix I, examples for every category is given.

Table 3 - Word categories

Attentional focus	Emotional tone	Cognitive complexity	Powerless
<i>1st singular</i>	<i>Positive</i>	<i>Insight</i>	<i>Fillers</i>
<i>1st plural</i>	<i>Negative</i>	<i>Causation</i>	<i>Non-fluencies</i>
<i>2nd person</i>	<i>Affiliation</i>	<i>Discrepancy</i>	<i>Tentative</i>
			<i>Power</i>
<i>3rd person</i>		<i>Conjunctions</i>	<i>Certainty</i>
		<i>Prepositions</i>	<i>Power</i>

Words bigger than 6 letters

3.4.2 Verbal mimicry

In order to measure verbal mimicry, the linguistic style matching (LSM) formula was calculated. The procedure of Gonzales and colleagues (2010) and Niederhoffer and Pennebaker (2002) was applied. Initially, the frequency with which each person said nine types of style words was measured with LIWC. Style words are words that often have no meaning on their own (Tausczik & Pennebaker, 2010). They show linguistic relationships

and are the glue that keeps sentences composed. In Table 4 an overview is given of the nine style words, and examples are displayed.

Table 4 - Style words

Style words	Examples
<i>Personal pronouns</i>	Ik, wij, jij, zij
<i>Articles</i>	De, het, een
<i>Prepositions</i>	Op, naar, van
<i>Auxiliary verbs</i>	Moeten, willen, kunnen
<i>Adverbs</i>	Heel, zeer, nogal
<i>Conjunctions</i>	Mits, tenzij, nadat
<i>Negations</i>	Nee, nooit, niet
<i>Quantifiers</i>	Veel, weinig
<i>Assent</i>	Ja, oke, goed

3.4.2.1 Leader-Follower LSM

In order to calculate the LSM scores for leader, the word-level LSM score for each of the style words is calculated. The average of these 9 word-level LSM scores are yielded to composite a measure of similarity between the leader and follower. Mathematically, preposition LSM² was calculated:

$$LSM_{preps} = 1 - (|preps_1 - preps_2|) / (preps_1 + preps_2)$$

resulting in

$$LSM = (ppLSM + aLSM + prepLSM + avLSM + adLSM + conjLSM + negLSM + qLSM + asLSM) / 9$$

Where preps 1 is the percentage of total words of person 1 that were prepositions and preps 2 is the percentage of prepositions in person 2.

² each style word category is measured individually

3.4.2.1 Group LSM

In order to calculate the LSM scores for entire teams, each member's language is compared with the overall percentage of the remaining team members. This resulted in separate LSM scores—one for each for each member in comparison to the remaining member. Mathematically, personal pronoun LSM was calculated in the following way:

$$pp1 = 1 (|pp1\ ppG|/(pp1 + ppG)),$$

$$pp2 = 1 (|pp2\ ppG|/(pp2 + ppG)),$$

$$pp3 = 1 (|pp3\ ppG|/(pp3 + ppG)),$$

$$pp4 = 1 (|pp4\ ppG|/(pp4 + ppG)),$$

resulting in

$$\text{Group } ppLSM = (pp1 + pp2 + pp3 + pp4) / 4,$$

resulting in

$$\text{Group } LSM = (\text{Group } avLSM + \text{Group } aLSM + \text{Group } caLSM + \text{Group } ppLSM + \text{Group } ipLSM + \text{Group } pLSM + \text{Group } nLSM + \text{Group } cLSM + \text{Group } qLSM) / 9$$

Where ppG is the percentage of personal pronoun use of the different team members established by getting their complete number of personal pronouns and dividing it by the total word count. For pp1, ppG would be calculated with words from Persons 2, 3, and 4; and so further. The same calculations were calculated for each team member for each style-word category. Then an average of the nine categories were averaged for each group to construct a total LSM score per group (Gonzales, 2010).

3.4.3 Leadership effectiveness (experts and followers)

Leadership effectiveness is measured by; (1) experts and (2) followers. The experts were elected in consultation with a staff member of HRM that had knowledge about the operating of each leader. The followers are members of the leader's team. Within the participating organization, there were 52 experts ratings collected, who

granted one effectiveness rating per leader independently. Leader effectiveness scores by experts were ranked on a scale of 1 (highly ineffective) to 10 (highly effective).

The follower's leadership effectiveness score was measured with the MLQ-5X-Short package (Avolio & Bass, 1995). A sample item is: "My supervisor is effective in representing me to a higher authority." The response categories are measured on a Likert scale: 1 (never) to 7 (always). All ratings were confidentially handled, and no individual of the organization had entry to the ratings.

Because of a lack of a significant correlation between leadership effectiveness of followers and experts, it was decided to include both perspectives.

3.4.4 Trust in leader

Cognitive and affective trust was measured by the eleven overall trust items that are part of the trust scale that is established by McAllister (1995). A sample item is: " I can talk freely to this individual about difficulties I am having at work and know that (s)he will want to listen". The response categories are measured on a Likert scale: 1 (never) to 7 (always).

4. Results

In this section, the results of the study are reported, divided into descriptive statistics, correlations between the various constructs and various analyses testing the relation between verbal behavior, linguistic style matching and perceived leadership effectiveness.

4.1 Descriptive statistics

4.1.1 Perceived leadership effectiveness (experts and followers).

In Table 5 an overview of the descriptive statistics of the dependent variable, perceived leadership effectiveness, is given. Perceived leadership is both measured by followers and experts and are displayed separately. As discussed in the Method section the scoring of perceived leadership effectiveness between experts (1-10) and followers (1-7) differs.

Table 5- Descriptive statistics / Perceived leadership effectiveness

	Minimum	Maximum	Mean	Std. Deviation
Leadership effectiveness <i>Followers</i>	3,60	6,25	5,31	,58
Leadership effectiveness <i>Experts</i>	5,25	8,00	7,26	,63

4.1.2 Word-use

In Table 6 an overview of the descriptive statistics of the independent variable word-use is given.

Table 6- Descriptive statistics / Word-use

	Minimum	Maximum	Mean	Std. Deviation
Words >6 letters	10,51	17,70	13,55	1,35
Personal pronouns	6,39	11,08	8,62	1,00
1st person singular	1,36	5,03	2,87	,80
1st person plural	1,06	4,05	2,45	,63
2nd person	1,18	3,69	2,13	,63

3rd person singular	,25	1,63	,82	,33
3rd person plural	,08	1,25	,48	,23
Prepositions	9,46	15,12	12,20	1,16
Conjunctions	9,58	14,42	11,71	1,23
Negations	,93	2,53	1,71	,40
Emotionality	1,49	3,07	2,15	,37
Positive emotion	1,06	2,53	1,64	,37
Negative emotion	,23	,93	,51	,18
Cognitive processes	12,94	19,26	15,36	1,32
Insight	1,40	4,01	2,62	,49
Causation	1,45	3,94	2,55	,49
Discrepancy	1,79	3,95	2,78	,45
Tentative	1,73	3,49	2,46	,42
Certainty	1,13	2,58	1,77	,35
Affiliation	2,13	4,74	3,13	,65
Power	,710	2,690	1,36	,40
Assent	,78	4,92	2,08	,91
Non-fluencies	,00	7,47	2,09	2,13
Fillers	5,33	16,88	10,79	2,20

4.1.3 Verbal mimicry (linguistic style matching)

In Table 7 an overview of the descriptive statistics of the independent variable linguistic style matching (both on leader-follower level, and at a group level) is given.

Table 7- Descriptive statistics / Linguistic style matching

	Minimum	Maximum	Mean	Std. Deviation
Linguistic style matching <i>Leader - Follower</i>	0	1	0,8	0,22
Linguistic style matching <i>Group</i>	0,45	0,92	0,8	0,11

4.2 Analysis – Word-use

4.2.1 Correlation

Table 8 displays the correlations between the word categories and both leadership effectiveness scores. Two word categories are significantly correlated with leadership effectiveness scores of followers. Leadership effectiveness rated by followers is significantly negatively correlated with 1st person pronoun plural ($r = -,353$) and

affiliation is also significantly negatively correlated with leadership effectiveness ($r = -.315$). There are no significant correlations between word-use and perceived leadership effectiveness by leaders.

Table 8- Correlation word-use and perceived leadership effectiveness

	Leadership effectiveness <i>Followers</i>	Leadership effectiveness <i>Experts</i>
Words >6 letters	0,07	-0,11
Personal pronouns	-0,10	0,08
1st pers singular	-0,03	0,05
1st pers plural	-,35*	-0,15
2nd person	0,24	0,21
3rd pers singular	0,16	-0,04
3rd pers plural	0,17	-0,02
Prepositions	0,01	0,14
Conjunctions	0,19	0,07
Negations	-0,05	-0,13
Affective processes	0,15	-0,19
Positive emotion	0,18	-0,16
Negative emotion	0,00	0,02
Cognitive processes	-0,02	0,02
Insight	-0,12	-0,04
Causation	0,18	-0,14
Discrepancy	-0,13	0,08
Tentative	0,14	0,03
Certainty	-0,23	-0,14
Affiliation	-,32*	-0,11
Power	0,08	0,13
Assent	0,07	-0,01
Non-fluencies	0,07	-0,16
Fillers	-0,01	-0,17

4.2.2 Regression

The regression analysis pointed out two significant word-use categories related to leadership effectiveness scores of followers. There were no significant word-use categories that are linked to the leadership effectiveness scores of experts. Concerning the leadership effectiveness scores of followers, a simple linear regression was calculated to predict leadership effectiveness based on 1st person pronouns. A significant regression equation (negative) was found ($F(1,50) = 9,430$, $p = .003$), with an R^2 of .159 ($\beta = -.313$). Another significant relationship was discovered between leadership effectiveness and

words of affiliation. A significant regression equation (negative) was found ($F(1,50)=7,475, p = .009$), with an R^2 of .13.

The outcome of the study shows that all hypotheses (regarding word-use) can be rejected. Moreover, the results show a reversed effect as proposed in H1 and H2. In addition to the proposed hypotheses, we explored the data further. Therefore, the five most effective and five least effective leaders were selected to study whether there is a significant difference.

4.2.3 The verbal patterns of effective and non-effective leaders ^(T-test)

In addition to the previous analysis, an explorative test was conducted to explore whether there is a difference in word-use of the five most effective and five least effective leaders ($N=10$). In total there were four significant differences. There is a significant difference between effective ($M=14.17$) and less effective leaders ($M=13,46$) regarding words bigger than six letters ($t(8) = -0,891, p = 0.002$). Furthermore, there is a significant difference between effective ($M=1.42$) and less effective ($M=1.92$) leaders regarding use of positive words ($t(8) = 2,041, p = 0.002$). In addition there is a significant difference between effective ($M=1.65$) and less effective leaders ($M=3.59$) regarding non-fluencies ($t(8) = 1,230, p = 0.02$).

4.3 Verbal mimicry (linguistic style matching)

4.3.1 Correlation

Table 9 displays the partial correlations between the verbal mimicry and both leadership effectiveness scores.

Table 9 – Correlation linguistic style matching

	Leadership effectiveness followers	Cognitive trust	Affective trust
Linguistic style matching <i>Follower-leader</i>	0,07	,09*	,10*
Linguistic style matching <i>Group</i>	0,21	x	x

4.3.2 Regression

4.3.2.1 Follower – leader LSM

There is no significant effect of linguistic style matching on the follower's ratings of leadership effectiveness. Thus, H6 can be rejected. To further exploit the dataset, the relation between verbal mimicry and trust was also explored (trust is a component of leadership effectiveness) and there is a significant effect of linguistic style matching on trust (both cognitive and affective).

Concerning the leadership effectiveness ratings of followers, a simple linear regression was calculated to predict leadership effectiveness based on affective trust. A significant regression equation was found ($F(1,510) = 5.477$, $p = .020$), with an R^2 of .109 ($\beta = 0.23$). Another significant relationship was discovered between cognitive trust and linguistic style matching. A significant regression equation was found ($F(1,512) = 4.077$, $p = .044$), with an R^2 of .008 ($\beta = 0.20$).

4.3.2.2 Group LSM

There is no significant effect of linguistic style matching on the followers' ratings of leadership effectiveness.

5. Discussion

This thesis presents an empirical study of 52 videotaped managers intended to identify specific verbal behaviors (word-use and verbal mimicry) in meeting settings which impact the perceptions of experts and followers regarding leadership effectiveness. First, the results of study will be answered, then the theoretical and practical implications and at last the strengths, limitations and future research suggestions.

The results indicate that increased use of singular pronoun plural (we, us, our) and words of affiliation have a negative effect on the perceptions of leadership effectiveness of followers, which is in contrary to hypotheses H1 and H2c. There are a couple of possible explanations for this unexpected result. The first possible explanation is the supposed '*warmth-competence trade*'. Singular pronoun plural (we, us, our) and affiliation are both examples of warm (communal) behaviors (Baxter 2008; Holmes & Stubbe, 2003). Research proposes that people adopt two fundamental trait dimensions, warmth (e.g., friendliness, trustworthiness, empathy, and kindness) and competence (e.g., intelligence, power, efficacy, and skill), to classify other individuals in order to simplify the complex and dynamic social world (Judd, James-Hawkins, Yzerbyt, & Kashima, 2005). A supposed surplus of one dimension indicates a deficit of the other dimension (Judd, James-Hawkins, Yzerbyt, & Kashima, 2005). As a result, individuals tend to be perceived as either competent but cold or as warm but incompetent. In social contexts, positive warmth evaluations are perceived as more important, whereas in organizational settings competence evaluations take primacy. According to Eagley and Karau (2002), people traditionally associate effective leadership with competence traits rather than with warmth traits. Thus, this stereotypical image of a leader could explain that the warmth behavior (singular pronoun plural, and affiliation) exhibited in the meeting does not match the image of an effective leader. However, in recent years there has been a paradigm shift on how leaders and potential leaders are evaluated (Eagly & Carli, 2007). As a reaction to rapid developments, organizations have evolved to be more team oriented. This phenomenon requires transformational leadership (Bass, 1990), a leadership style that calls for competence *and* warmth. According to Cuddy, Blick and Benninger (2011), competence may still be primary in organizational contexts, but warmth has increased in importance.

Another possible explanation is the '*warmth ingenuity/nonverbal interaction*'. Individuals are aware that others can have incentives for displaying warmth. When followers

perceive that the warm words of a leader are ungenune, their perceptions of the leader could be negatively impacted. It is likely that this unauthentic behavior is perceived by means of an interaction of nonverbal behavior, since the more ambiguity a person perceives, the more a person trusts in the non-verbal behavior of the other person (Darioly & Schmid Mast, 2014). It is important to note that individuals also project warmth/coldness and competence/incompetence by means of their nonverbal behavior (Cudy, Blick & Benninger, 2011). Thus, when a leader says warm words but projects a cold demeanor it is likely that the warmth is perceived as ungenune. These nonverbal cues can have strong outcomes in workplace interactions. Along these lines, it is expected that there could be an interaction of nonverbal behavior in the results of this study. Therefore, future research that combines word-use and non-verbal behavior may yield interesting results.

On the grounds that none of the hypotheses (regarding word-use) are supported, an explorative analysis was executed to explore if there is a difference in word-use in the five most effective and the five least effective leaders. The results indicate that there is a significant negative difference between the five most and least effective leaders in the use of positive words. The warmth-competence trade (that is discussed above) can also be applicable in this case since positive emotion is indicated as a strong indicator of warmth. Furthermore, the most effective leaders used more words bigger than 6 letters. As discussed in the theoretical framework, words bigger than 6 letters are part of the cognitive complexity category. Cognitive complex leaders are often perceived as more effective because the leaders appear to be more competent and competence traits are in turn associated with effective leadership (Dobosh, 2015). And last, non-fluency in language is more present in the five least effective leaders. Studies have shown that fluent, non-hesitant speech is perceived as more credible and the actors are perceived as more competent. (Barge, Schlueter, & Pritchard, 1989; Erickson, Lind, Johnson, & O'Barr, 1978; McCroskey & Mehrley, 1969).

In sum, all negative significant results regarding word-use point towards warmth and all positive significant outcomes point towards competence. This might indicate that there is some interaction of warmth and competence in verbal behavior in leadership effectiveness scores. Future research can look into the mediating role of warmth/competence perceptions in verbal behavior and leadership effectiveness.

Another aspect of this study is the investigation of verbal mimicry in relation to leadership effectiveness. The results indicate that verbal mimicry has no influence on leadership effectiveness as perceived by followers, thus H6 can be rejected. To exploit the dataset, the relation between verbal mimicry and trust was also explored. As a result, the researcher of this study discovered that verbal mimicry relates significantly to the trust (both affective and cognitive) of followers in their leaders. In earlier studies, it is suggested that linguistic style matching (i.e. verbal mimicry) and relationship engagement reciprocally increase one another and jointly facilitate positive relationship outcomes (e.g. group cohesiveness, and staying in a relationship) (Niederhoffer & Pennebaker, 2002; Gonzales et al., 2010). Trust is an example of a positive relationship outcome (Gonzales et al, 2010). Thus, verbal mimicry may predict relationship outcomes that entail reciprocity among which trust. However, it is remarkable that verbal mimicry has no effect on leadership effectiveness because trust is one of the most essential elements of effective leadership. On the other hand, leadership effectiveness does entail more than just the trust dimension. For instance, performance is also a crucial factor in leadership effectiveness. Nevertheless, it could be possible that trust mediates the relationship. Future research can look into the mediating role of trust in verbal mimicry and leadership effectiveness.

Theoretical implications

Even though multiple scholars stress the importance of leadership and the effect of verbal behavior, just a couple of scholars specifically study this relationship and present empirical evidence. The present study adds to the current repertoire of verbal leadership theory, by means of the identification of two specific verbal behaviors of leaders that impact the perception of followers regarding effective leadership. These specific behaviors refer to the use of first pronoun plural and words of affiliation. Furthermore, this study identified a supposed relationship between trust and verbal mimicry. The LSM measure may serve as a sensitive measure that goes beyond self-reports. Organizational scholars may also use this measure to further explore the relationships between leaders and followers.

Practical implications

The knowledge of which verbal behaviors add to leadership effectiveness is valuable for organizational success (Darioly & Schmid Mast, 2014). Organizations that want to edge forward should keep a notice on the verbal aspect of leadership. However, individuals are not always aware of how they talk. This awareness can be trained in leadership development training that focuses on verbal behavior. Keeping the results of this study in mind, additional attention should be given to words that might influence leadership effectiveness perceptions. For instance, the first pronoun plural and words of affiliation. These words should be used by leaders in a mindful manner since these words may generate perceptions of warmth that in turn may diminish perceptions of competence. It is important that a leader understands when judgments on one dimension (warmth or competence) boosts or harms judgments on the other (Cudy, Blick & Benninger, 2011). In addition, leaders should keep in mind that the intention of verbal behavior and nonverbal behavior should be aligned to avoid ambiguous communication that could be perceived as negative. Furthermore, leaders should consider their degree of fluent speaking. In this study, non-fluency is more apparent in the least effective leaders. So, if leaders consciously manage their fluency of speech this may yield positive effects. Leaders could consider training in presenting and videotaping it in order to become more aware of their manner of speaking. Keeping in mind the supposed relationship between verbal mimicry and trust, a leader can get training to get more aware of the mimicry between him and his followers because it is a mostly an unconscious process. Since, mimicry may be a powerful tool in building and maintaining positive relationships between individuals (Van Baaren, Holland, Steenart, & van Knippenberg, 2002).

Strengths, limitations and future research

This study has three main strengths: (1) field study, (2) quantitative study of language (3) triangulation. A strength of the current research is that it is executed in a field setting: organizational meetings. This enables the researchers to study the use of natural speech of leaders in a daily setting, which increases the external validity of the research. Another strength of this study is its quantitative nature. The data-driven method ensures that objectivity is warranted and subjectivity is at bay. The last strength that will be discussed is triangulation. This

study utilizes triangulation concerning the various sources of data (data triangulation), this decreases common source and method bias (Patton, 1999).

In spite of the strengths, the current study has four key limitations: (1) the small sample, (2) external validity (3) decontextualizing words (4) limited formula LSM. The sample that is analyzed emanates from one organization in the public sector in the Netherlands. As a result the generalizability is restricted, because of the small sample, Western culture, and the one specific organizational culture. To investigate the generalizability, scholars could replicate the current study with data originating from other cultures and/or other organizational cultures. Another limitation is that in this study words are decontextualized. Therefore, sarcasm, humor, metaphors and other aspects of language that are less than straightforward are lost. This could have given a more in-depth information about someone's verbal behavior. The last limitation that will be discussed is the formula of LSM. LIWC is dependent on the number of words to cast a reliable image of someone's verbal behavior. However, the formula does not take the number of words into account. This could be a problem because there are multiple followers that speak little in the meetings and in the formula, every follower weighs the same. To discuss this limitation there was correspondence with Gonzales and Taylor (both scholars that have published with the formula of LSM). However, both pronounced that they did not take this into account in their study. Amy Gonzales stated an explanation in the email-correspondence: ‘even if someone spoke very little, the percentage of those words that matched was relevant’. With this in mind, it was decided to also not include an extension in this study. However, future research could explore an extension of the formula. Furthermore, it is not possible to extract from the formula who is mimicking who. However, research indicated that mimicry occurs most often with the followers following the leader, since there is a power difference (Gonzales et al, 2010). And last, the LSM formula does not take ‘turn to turn mimicry’ into account, it only looks at the general conversational level. A ‘turn to turn mimicry’ analysis could lead to a more in-depth analysis of verbal mimicry.

The current research provides multiple recommendations concerning future research. Therefore, the following three proposals for future research are presented.

Proposal 1: Previous scholars concentrated on leadership behaviors. Hoogeboom and Wilderom (2015) analyzed leadership behaviors primarily based on the verbal utterance, in relation to leadership effectiveness in meetings. This method, in contrast to this current study, incorporates context. A combination of leadership behavior in combination with specific word-use may take care of the decontextualizing that is present when word-use is analyzed separately. This way, it is possible to analyze which words leaders use when for instance a leader ‘provides feedback’ or during other specific behaviors. The literature concerning the relationship between leadership behavior in combination with specific word-use, linked to the leadership effectiveness context, is scarce and is an opportunity to study.

Proposal 2: The complete communicative process is regulated by the combined nonverbal and verbal behaviors (Kendon, 2004; Maricchiolo, Livi, Bonaiuto, & Gnisci, 2011). Studying one of these separate may lead to some interaction effects of the other. Since it is suggested that nonverbal behavior entails 80% percent of the communicative process, it could especially be lucrative to include nonverbal behavior while studying verbal behavior. The literature concerning the relation of specific word-use and nonverbal behavior connected to leadership effectiveness context is limited and exploring this relation might yield new insights.

Proposal 3: Language effects culture (Brewer & Gardner, 1996) and culture effects language (Na & Choi, 2009). For instance, languages whose host culture values individualism favor responses toward individualism, and languages whose host culture values collectivism favor responses toward collectivism (Ayyash-Abdo, 2001). Thus, it could be interesting to explore if there is a difference in effective verbal behaviors for leaders in other cultural contexts.

Conclusion

In the current study, the verbal behavior of middle managers (in a field setting) in relation to their leadership effectiveness was analyzed with a quantitative content analysis fueled by the research question: “To what extent do word-use and verbal mimicry influence perceived leadership effectiveness?” This study indicates that some specific verbal behaviors of leaders in a meeting influence the perceptions of effective leadership. In this study, a negative significant effect of the use of first-person pronoun plural and words of affiliation on the perceived

leadership effectiveness was found. Furthermore, a significant difference in word-use of the five most and the five least effective leaders was found. The five most effective leaders used more words bigger than six letters and the least effective leaders used more positive words and had more non-fluencies in their speaking. Since there was no relation found between verbal mimicry and perceived leadership effectiveness, the relation between verbal mimicry and trust, a vital aspect of perceived leadership effectiveness, was explored and a significant effect of verbal mimicry on trust (both cognitive and affective) was found. The discoveries of this study add to the limited literature on specific verbal behaviors in relation to leadership effectiveness and could contribute to leadership development training.

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Appendix I

Table 10 - Examples word categories

Attentional focus	Examples
<i>1st singular</i>	ik, mijn
<i>1st plural</i>	wij, ons
<i>2nd person</i>	jij, jou
<i>3rd person</i>	zij, hun
Emotional tone	
<i>Positive</i>	leuk, gelukkig, positief
<i>Negative</i>	vies, stom, naar
<i>Affiliation</i>	hou, lief, aardig
Cognitive complexity	
<i>Insight</i>	denk, weet
<i>Causation</i>	daarom, omdat
<i>Discrepancy</i>	zouden, moeten
<i>Conjunctions</i>	en, maar
<i>Prepositions</i>	met, boven
<i>Words bigger than 6 letters</i>	bedrijfsbelang, concentratie, hollistisch
Powerless	
<i>Fillers</i>	dus, zeg maar, weet je wel
<i>Non-fluencies</i>	uh, hmm, di-
<i>Tentative</i>	misschien, zou, waarschijnlijk
Power	
<i>Certainty</i>	zeker, ja, altijd, nooit
<i>Power</i>	eis, moet, controle

Appendix II

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Appendix III
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