Bachelor's Thesis

# My Boss is Only Funny In-Person: Connecting Leader Humour and Multimodality

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# Abstract

This study examines the effect of multimodal communication on leader humour. With digital communication channels (modes) becoming increasingly prevalent in workplaces, understanding how leader humour translates across these mediums is essential. The research explores how leader humour, typically effective in face-to-face (FTF) interactions, is perceived and its impact when conveyed through computer-mediated communication (CMC) channels such as emails, text messages, and video calls. Employing a mixed-methods approach, the study collects both qualitative and quantitative data to assess the effects of leader humour on positive employee outcomes, specifically leader-member exchange (LMX), work engagement, and leader trust.

Study I utilised focus groups and long-answer surveys (N=13) to formulate hypotheses on the relationships between multimodality, leader humour, and positive employee outcomes, where communication channel strength moderates the relationship between leader humour style and positive employee outcomes. Study II utilised a multiple-choice survey (N=74) to test these hypotheses. Contrary to the theoretical expectation that the communication medium would moderate the relationship between leader humour and positive employee outcomes, the findings reveal no empirical evidence to support this hypothesis. Several potential explanations for this result are discussed. This study contributes to the existing research on humour and leadership by incorporating the dimension of multimodal leader humour.

# Acknowledgement

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# 1 Introduction

During the height of the COVID-19 pandemic, around 50% of the US workforce was completing their work virtually, compared to the prior 15% (Brynjolfsson et al., 2020). Around the world, many countries' mandated quarantine rules made it compulsory for people to work from home. While virtual work was previously seen as inferior to face to face (FTF) work, this transition pushed employers to confront the potential benefits of (semi-)virtual work, breaking cultural and technical barriers and leading a shift both in practice and paradigm (Lund et al., 2021). As an effect of this paradigm shift, many organisations now offer some form of virtual teams, and most, if not all, include some form of computer-mediated communication (CMC) as one of their regular communication channels (modes) (Bal & Bulgur, 2023).

In the leader-follower relationship, humour helps create a connection and bond, inspire creativity, and create a comfortable atmosphere (Cao et al., 2023; Ho et al., 2011; Ponton et al., 2020). Due to the universal digitalisation of work, this relationship has gained an added dimension as leaders and followers communicate over multiple (computer-mediated) channels, leading to the formation of multimodal teams (Ben Sedrine et al., 2020). As this shift occurs, it also stands to reason that there is a potential shift in how humour is utilised and received.

Humour can be present in almost all interactions, and therefore it should also occur in multimodal teams (Scheel & Gockel, 2017). Leaders, who often set the tone of a team's work atmosphere, are able to use a mix of different channels to express, share, and respond to humour, leading to a different experience of leader humour for team members (Neves & Karagonlar, 2020). Therefore, this warrants taking a closer look at how multimodal leader humour is experienced by followers, and inspect how it affects different aspects of work, such as team cohesion, well-being, and leader-member exchange (LMX).

CMC is characteristically different from FTF communication in two dimensions of social presence (Manstead et al., 2011). Physically, many nonverbal communication cues can be reduced by CMC. When communicating via channels such as text messages and emails, it becomes difficult to decode humorous messages as certain pieces of information, such as tone or body language, are not easily transmitted. Socially, people's ability to stand out and be noticed is greatly reduced, which may lead to a lack of understanding of others' perspectives and to more perceived aggressive humour over computer-mediated platforms. As humour can be very rich and ambiguous and not always very simple and clear, it may be seen as less effective when transmitted digitally.

While the effects of leader humour have already been extensively researched in purely FTF contexts, this research aims to explore how multimodality may limit or enhance the team member's experience of leader humour. The core concern of this study stems from the rapid digitalisation of work causing leader-follower communication to become increasingly computer-mediated, and understanding what consequences this transformation has for the effects of leader humour on employees. While this shift has prompted research on leadership styles, meeting effectiveness, and employee attitudes, little attention has been paid to assess how multimodality impacts leader humour (Ben Sedrine et al., 2020; Karl et al., 2022; Willermark & Islind, 2022).

The purpose of this study is to explore and understand employees' experiences of multimodal leader humour and "their […] perceptions of humour […] in computer-mediated" and FTF communication (Scheel & Gockel, 2017, p. 131). This was outlined by Scheel and Gockel (2017) as an area of potential research due to the rapid digitalisation of work. To investigate how multimodal environments affect leader humour's effect on followers, the following research questions were posed:

**RQ1.** *How does the use of humour by leaders in a multimodal communication environment affect followers' working experience?*

**RQ2.** *How does multimodal communication moderate the relationship between leader humour and followers' working experience?*

## 2 Theoretical Framework

### 2.1 Humour and Leadership

#### 2.1.1 Understanding Humour

There are various theories which try to explain humour, such as superiority theory, relief theory, incongruity theory, and benign violation theory (Duncan, 1985; McGraw & Warren, 2010; Shurcliff, 1968). Each attempt to explain either the motivation behind sharing humour or the characteristics of a humour object.

Superiority theory is characterised by the idea that a person laughs at others' misfortune, allowing them to assert their superiority based on others' shortcomings (Duncan, 1985). A criticism of this theory is that it does not account for humour which does not associate with feelings of superiority, or how those feelings are actually distinct from the humour itself (Cooper, 2008).

Relief theory suggests that humour is a method to release repressed emotions, tension, or stress through emotional relief, using laughter as a way to reduce psychological stress (Shurcliff, 1968). The expression of humour is motivated by the urge to reduce tension and provide a release, and relief theory focuses on the expected outcome of sharing humour as its main indicator.

Incongruity theory, or incongruous juxtaposition theory, proposes that humour is derived from incongruous situations, where something is contrary to some expectation (Cundall Jr., 2007). Incongruity theory covers a more general occurrence of humour than superiority and relief theory, but is still considered incomplete by some (Morreall, 1983). Cundall Jr. (2007) suggests that incongruity theory is unable to account for a broad range of humorous events, noting that some humour does not stem from alleged incongruity.

Benign violation theory is one of the most recent theories of humour and suggests that humour is derived from benign violations of social norms (McGraw & Warren, 2010). The hypothesis requires three conditions to be true in order to elicit humour: "a situation must be appraised as a violation, a situation must be appraised as benign, and these two appraisals must occur simultaneously" (McGraw & Warren, 2010, p. 1142). This theory emphasises the context and individual differences in humour appreciation. What is seen as benign to one person might be injurious to another. Both incongruity theory and benign violation theory focus on the nature of the humour object over the motivation to share humour.

### 2.1.2 Social Functions of Humour

Humour is used in both interpersonal and intrapersonal contexts, depending on the direction of humour. Sharing laughter and jokes can help enhance relationships with others by using interpersonal humour that "oils the wheels of communication and permits the establishment of social relations with a minimum of conflict" (Ziv, 1985, p. 32). The use of interpersonal humour aims to "increase other's feelings of wellbeing, reduce conflicts and strengthen ties between individuals, and increase one's attractiveness to the group" (R. A. Martin et al., 2003, p. 52). In addition to those purposes, within larger group settings which often occur in the workplace, humour also serves to raise the morale of members, enhance group cohesion, and reinforce group norms (Martineau, 1972).

Additionally, humour can be used to enhance the self. It functions as a method to cope with stress, as a defence mechanism, and releases tension (R. A. Martin et al., 2003). Humour can be a powerful tool to assert oneself and one's feelings of triumph and mastery over a particular situation. This use of humour focuses on preserving and protecting the self, sometimes at the expense of others. Humour directed at enhancing the self can still serve social functions in relationships with others, as it can demonstrate self-confidence and self-sufficiency, but can also be used to put others down for one's personal gain. Within a workplace context, these features of intrapersonal humour can heavily influence the leader to follower relationship (Rosenberg et al., 2021).

### 2.1.3 Humour Styles

When considering how individuals use humour, R. A. Martin et al. (2003) suggested it can be separated into four styles: affiliative, self-enhancing, aggressive, and self-defeating. They can be placed in one of four quadrants, as shown in Figure 1. Affiliative humour is characterised as "non-threatening and sociable" and potentially enhances relationships by sharing humour and laughing together (Altmann, 2024, p. 1). Self-enhancing humour "enhances the self in challenging or stressful situations", allowing the individual to easily recover from difficult situations and create a positive atmosphere (Altmann, 2024, p. 1). These humour styles are categorised as adaptive humour styles and are characterised by sharing benign humour (R. A. Martin et al., 2003). They relate positively to extraversion, openness, self-esteem, and well-being, and negatively to neuroticism (Altmann, 2024; Fabio et al., 2023; R. A. Martin et al., 2003).

Aggressive humour is characterised by its threatening properties, where the individual sacrifices others for the sake of enhancing the self. This humour style is directed at other people and often uses them as the "humour object to be laughed at", using spiteful and derogatory communication (Altmann, 2024, p. 2). Self-defeating humour is instead directed at the self at one's own expense, fulfilling the need to enhance a relationship at the cost of the individual sharing the humour. Individuals who use self-defeating humour put themselves down, sometimes in an effort to put others up (R. A. Martin et al., 2003). These humour styles are categorised as maladaptive, and show positive correlations with aggression and neuroticism, and negative correlations with conscientiousness and agreeableness (Altmann, 2024; Fabio et al., 2023; R. A. Martin et al., 2003).

Most people engage in a mix of all humour styles, but often have a clear preference for one (R. A. Martin et al., 2003). Due to humour being a very significant aspect of communication

and forming relationships, an individual's humour usage can often be used as a potential predictor of the type of connections they form.

R. A. Martin et al. (2003) created a corresponding questionnaire which can measure how much an individual identifies with each humour style. The Humour Styles Questionnaire (HSQ) is a 32-item self-report scale, where each humour style has eight corresponding items. It is currently one of the most widely used tools in humour research, as it is the most popular attempt at operationalising humour. It has been widely translated and adapted to be used in the workplace or with children (Scheel et al., 2016; Silvia & Rodriguez, 2020). However, it does not come without criticism. For example, Silvia and Rodriguez (2020) argue that the affiliative score is much easier to endorse than the other subscales, while Galloway (2023) asserts that several HSQ items do not consider the motivations behind sharing humour.

Nevertheless, these dimensions of humour can be used as a basis to understand an individual's humour style and may have a significant influence on their relationships with others, including in the workplace. When specifically considering leaders, humour is a powerful tool which can be used to either strengthen and reinforce relationships or weaken and undermine them.

*Figure 1: Humour Styles Dimensions (R. A. Martin et al., 2003)*
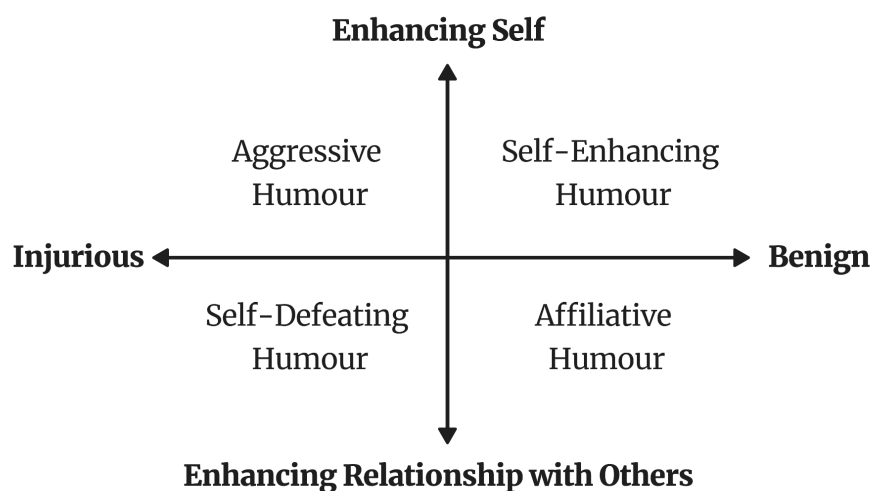


### 2.1.4 Humour in Leadership

While there is a definite relationship between humour and leadership, "the characteristics of the relationship cannot be easily identified" (Rosenberg et al., 2021, p. 10). However, leader humour has been observed to create team cohesion, establish a leadership identity, and generate energy (Holmes & Marra, 2006; Rogerson-Revell, 2007; Watson & Drew, 2017). In theory, any factors associated with leadership can become a moderator of the humour-leadership relationship. Factors such as "trust in the leader, leader gender, and situational factors affecting appropriateness" have exhibited moderating effects on the relationship between leader humour use and leadership outcomes (Rosenberg et al., 2021, p. 10).

When considering how a leader's humour style may affect followers, trends are found regarding each humour style. Affiliative leader humour can lead to increased leadership effectiveness and positive leader-member exchange (LMX) (Ho et al., 2011; Wisse &

Rietzschel, 2014). Conversely, leaders with an aggressive humour style can increase the employees' intention to leave, negatively impact employee wellbeing, and at high levels is a strong moderator of the relationship between abusive supervision and dysfunctional resistance (Goswami et al., 2015). Affiliative and aggressive leader humour have opposing effects regarding the relationship with LMX (Pundt & Herrmann, 2015; Wisse & Rietzschel, 2014). Both affiliative and aggressive humour do not rely on the leader's sense of self to have their effects, as the leader is not the humour object. Humour style can be indicative of other qualities which create a stronger leader. Considering how an affiliative humour style relates positively to extraversion, openness, self-esteem, and wellbeing, a leader with an affiliative humour style may also have these qualities in their leadership style.

The reception of both self-enhancing and self-defeating humour relies on followers' existing perception of their leaders, and the effects can vary greatly depending on the followers' own humour style. Due to the nuances behind humour aimed at the self, followers benefit from having increased trust in their leader when interpreting their leader's self-enhancing humour as confident instead of boastful (Cooper, 2008). Utilising self-enhancing humour generally benefits leaders as it is able to positively influence employee creativity and increases when trust in the leader grows (Lee, 2015). Positive leader humour is also "particularly helpful for employees with a negative self-view", as these individuals can externalise this view into their environment and react positively when leaders use positive humour as a social lubricant to show their trustworthiness (Neves & Karagonlar, 2020, p. 124). This aligns with the finding that the receiver is critical in humour effectiveness (Cooper, 2008). Additionally, self-enhancing leader humour can signal to followers that the leader believes in themselves and is able to maintain a positive outlook even in difficult moments, which may create a stronger leader-follower relationship and increase work engagement (Rosenberg et al., 2021).

Employee reception of self-defeating humour can be considered more complex than the other humour styles. This stems from the differentiation between self-defeating and self-deprecating humour. Self-defeating humour contains "an element of emotional neediness, avoidance, and low self-esteem", whereas self-deprecating humour "conveys an honest and humble look at oneself" (Hoption et al., 2013, p. 6; R. A. Martin et al., 2003, p. 54). Self-deprecating humour is often associated with higher self-esteem, while the contrary is true for self-defeating humour. Self-defeating humour may decrease the trust in the leader because the leader demonstrates their lack of self-belief. It can "primarily be interpreted [...] as compensating for a lack of ability (or self-confidence)" (Neves & Karagonlar, 2020, p. 117). Conversely, "leader self-deprecating humour significantly reduces employee silence" and is able to create "a harmonious and democratic communication atmosphere within the team" (An et al., 2023, p. 1685). Neves and Karangolar (2020) suggest that the use of "[self-defeating] humour by leaders is detrimental to all employees". The utilisation of self-deprecating humour is seen as a tool to create trust and form a stronger leader-follower relationship, while the use of self-defeating humour has the exact opposite effect. The significant difference between the two being the perceived self-esteem of the humour producer, which is highly subjective.

Within leadership, humour functions as a method to affect relationships in the workplace. As indicated by Cooper (2008), leader humour is a relational process. A source expresses humour, the target comprehends the expression and performs relational processes with regards to the perception of the humour, which finally leads to an increase or decrease in the

source-target relationship quality (Cooper, 2008). In a leader-follower relationship, it is important to emphasise the existing hierarchical distance between the two subjects. A leader's use of humour is able to positively and negatively affect how followers perceive, work with, and experience leaders.

## 2.2 Media Richness

### 2.2.1 Media Richness Theory

When considering the use of humour nowadays, we need to take into account the plethora of communication methods readily available. While the basis of humour research focuses on face to face (FTF) communication, the introduction of computer-mediated communication (CMC) media such as phone calls, video conferencing, text messaging, and emails has greatly changed how we experience humour in our everyday lives (Yus, 2023). These mediums are often more or less suited for the communication of humour.

The media richness theory (MRT) was introduced by Daft and Lengel (1986) in order to classify the richness of different communication channels to share information and increasingly complex messages. Communication channels differ in "their capacity to convey information", with some mediums being limited due to their physical and digital characteristics and constraints (Lengel & Daft, 1988, p. 226). They outlined media richness as a function of different characteristics, including: (a) ability to handle multiple information cues simultaneously; (b) ability to facilitate rapid feedback; (c) ability to establish a personal focus; and (d) ability to utilise natural language (Lengel & Daft, 1988, p. 226).

The different communication methods available can be ranked based on 'richness', a composite of these characteristics, forming a hierarchy. This hierarchy can be seen in a visualisation in Figure 2.

*Figure 2: Media Richness Hierarchy (adapted from Lengel & Daft (1988))*
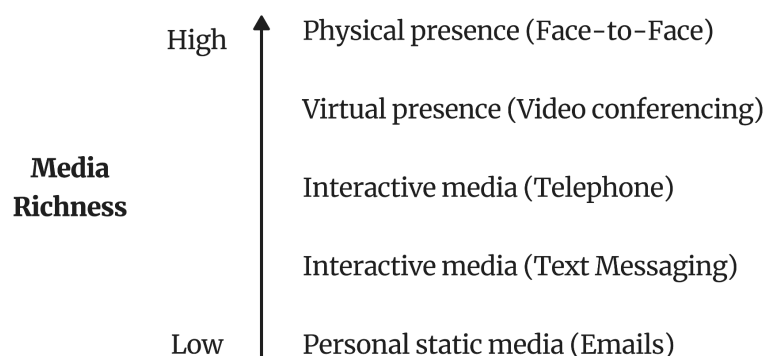
FTF is the richest medium to communicate in as it meets all the capacities: a direct experience, multiple information cues, immediate feedback, and personal focus. It allows the communicators to discuss a broad range of complex topics, and ensures that both speaker and receiver are given the opportunity to communicate effectively with verbal and nonverbal cues. Video conferencing comes close to FTF communication, with a few caveats. It is less effective at communicating nonverbal cues due to the limited field of focus of the camera, and the speaker and receiver do not occupy the same space. Many body language cues, such as physical proxemics and cues of restlessness (leg shaking, hand rubbing, etc.), are also

missing (Norrick, 2004). However, it is a direct experience which is able to handle multiple information cues, immediate feedback, and personal focus. Video conferencing can place communicators outside of a 'neutral' work setting and into more personal environments, which can have an influence on how messages are encoded and decoded (Karl et al., 2022).

Telephone conversations provide "rapid feedback, but lack the element of 'being there'", and all body language cues are eliminated (Lengel & Daft, 1988, p. 226). Communication via phone call does require immediate feedback and creates a stronger environment for personal focus than asynchronous media. Text messaging, via messaging apps such as iMessage and WhatsApp or via work communication platforms such as Microsoft Teams or Slack, lose the capacity to hear tone and do not require a personal focus or immediate feedback. However, they are able to keep a record of different messages such as text, photo, video, or audio recordings. Additionally, many features in text messaging allow the user to know when someone else has read their messages or is writing something. Email, as one of the leanest mediums, loses many of these capabilities. While emails can have a personal focus, they cannot convey many cues and are slow in receiving feedback. Each medium has "an information capacity based on its ability to facilitate multiple cues, feedback, and personal focus" (Lengel & Daft, 1988, p. 226).

Communicators can choose which medium to use depending on the message they want to get across. Nonroutine messages, such as conflict management, are best suited for richer mediums, while routine messages, such as basic reminders, are best suited for leaner mediums. Communicating nonroutine messages via lean media can cause communication failures, as information is lost, misinterpreted, or cannot be responded to. Conversely, communicating routine messages via rich mediums can also cause communication failures, when "excess cues cause confusion and surplus meaning" (Lengel & Daft, 1988, p. 227).

### 2.2.2 Multimodal Communication

In today's hybrid work context, many workers communicate using multiple platforms and communication methods. Many teams offer some form of virtuality for flexibility, or communicate via CMC platforms, with over half of Dutch people sometimes working from home each week (Centraal Bureau voor de Statistiek, 2024). As outlined by Lengel and Daft (1988, p. 227), leaders tend to "prefer to use a range of communication media, depending on the message to be communicated". A 'multimodal' communication network is formed when leaders and followers communicate via a variety of mediums. However, not all messages are shared via the most appropriate communication channels, sometimes leading to communication failures and misunderstandings.

Nowadays, most of our relationships exist on multiple platforms and it is unlikely to only communicate with colleagues and supervisors via a single medium. This multimodal network of channels works together to facilitate collaboration and development within teams. Effective leaders require multimodal literacy, and should be capable of "being conversant with the different modes to create texts rather than simply being consumers of such texts" (Hartle et al., 2022, p. 8). As more mediums are used by leaders and followers to communicate, both parties need to adapt to the needs of the messages and characteristics of the media. When using leader humour, effective leaders should be capable of adapting humour across various mediums to suit message needs and media characteristics.

## 2.3 Humour and Multimodality

In the last few decades, humour, along with most communication, has shifted from being primarily focused on in-person communication to much broader, asynchronous, and expansive interactions (Yus, 2023). Humour is generally a complex message, and its foundations are rooted in FTF interactions, often requiring understanding of tone, individuality, and body language. According to relevance theory, in order to properly communicate humour, receivers need to be able to cognitively process "not only utterances but also sights, sounds, smells, thoughts, memories or conclusions of inferences [which] may all provide potentially relevant inputs" (Wilson & Sperber, 2006, p. 608). Due to the constraints of some media, this becomes much more difficult. Within both text messaging and emails, it can be difficult to provide enough information and attempts to convey humour can get lost in translation. Conversely, in FTF interactions, earlier discussions are much less readily available than in more asynchronous platforms, and participants may draw on vastly different memories, thus not coming to a consensus regarding humour (Yus, 2023).

Some humour habits have been born out of the internet and CMC channels and seep into everyday conversation, with the presence of memes, GIFs, and emojis very recognisable to many (Yus, 2023). Internet humour tends to rely more on collective memories, employing the callback much more often. This comedic device requires the receiver to understand context from earlier interactions or certain cultural references in order to fully comprehend the joke, and is common when communicating via asynchronous mediums, as jokes are more easily catalogued and retrieved.

Between each communication channel, there are distinctions within their design which lead to different humorous interactions. When sharing humour over different channels, individuals need to work with the contextual interface constraints in order to ensure that they are still able to convey intentions of humour. For example, within certain messaging interactions, "humour is very frequent [and] often the only reason for users to connect with one another" (Yus, 2023, p. 178). Due to the platform's constraints, it does "exhibit limitations compared to the textual richness of other interfaces" such as video conferencing or FTF interactions, but users are able to convey intentions of humour and communicate by adapting to these characteristics (Yus, 2023, p. 179).

### 2.3.1 Multimodal Leader Humour

When considering the application of multimodal humour to the leader-follower relationship, it is important to note that often the main purpose of the relationship is not connection or leisure, but rather work and productivity. Even though workplace friendships can come out of this relationship, the initial basis is typically rooted in some form of formalised hierarchy, no matter how small the (perceived) power distance is (Lord et al., 1999). Some humour was born out of purely CMC channels, such as memes, GIFs, and cultural internet humour. However, due to the working environment's roots in FTF interactions, most humour shared at work focuses on FTF cues and interactions, and instead needs to be adapted to CMC environments.

As mentioned previously, leader humour can have various positive and negative effects on followers, ranging from affiliative humour increasing LMX, self-enhancing humour benefitting creativity, aggressive humour increasing the intention to leave, and beyond. With the introduction of multimodal leader humour, it is likely that these relationships will be

weaker, as the communication channel is less effective at conveying attempts at leader humour and will therefore resonate less with followers. Leader to follower communication may not have adapted to a state where online humour habits are effectively adopted throughout all platforms.

## 2.4 Conceptual Model

The conceptual model in **Figure 3** is based on the theoretical framework. It presents the relationship between the four humour styles and positive employee outcomes, and the moderation effect from communication channel strength and multimodality.

*Figure 3*: *Conceptual Model*
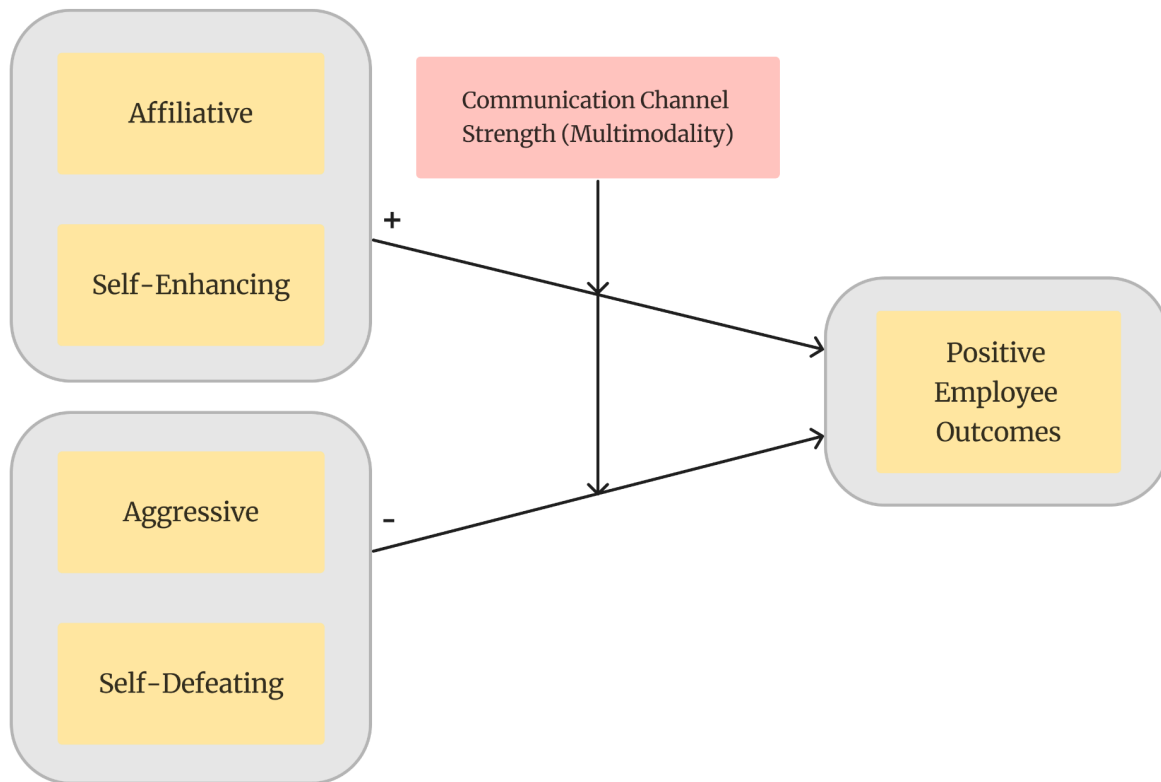


Based on the literature, it can be predicted that adaptive leader humour styles (affiliative and self-enhancing) are positively related to positive employee outcomes, whereas maladaptive leader humour styles (aggressive and self-defeating) are negatively related to positive employee outcomes. Furthermore, it can also be predicted that communication channel strength moderates these relationships. As communication channel strength increases, adaptive humour styles exhibit stronger positive relationships with positive employee outcomes, while maladaptive humour styles show stronger negative relationships with positive employee outcomes.

The most prevalent positive employee outcomes were determined using a qualitative study (Study I), which determined the hypotheses for quantitative testing and the refined conceptual model. Finally, the refined conceptual model and hypotheses were tested statistically using a survey, to test whether there was empirical evidence regarding the research questions (Study II).

# 3 Methodology

In order to answer the research questions and form and test the hypotheses, a mixed methods study was devised, comprising a qualitative portion (Study I) and a quantitative portion (Study II).

The qualitative study was used to explore whether there was a suggestion of communication channel having a moderating effect on the relationship leader humour and follower effects, and decide what were the most prevalent positive employee outcomes from leader humour. From the literature, various different outcomes were outlined, including, but not limited to, LMX, wellbeing, and creativity. Within Study I, participants were able to share their own experiences regarding leader humour, through focus groups and long form questionnaires. This provided first-hand accounts and participant driven qualitative insights on multimodal leader humour, which was subsequently encoded and analysed to see how leaders' use of humour affected followers' working experiences and behaviours, and whether multimodality had an effect on the relationships, according to the participants' personal perspectives. By using qualitative methods, it was possible to get rich descriptions and explanations of participants' perception of the processes behind multimodal leader humour. After the completion of Study I, the initial hypotheses were created and a more detailed conceptual model was created.

Study I created the direction and course of action for Study II, where the dependent variables included in the survey were based on the findings of the focus groups and long form questionnaires. Based on the results, three aspects of followers' work experience emerged as the most prevalent: LMX, work engagement, and leader trust. These were deemed as the most dominant positive effects of leader humour on employees. The quantitative study was used to test the hypotheses and answer the RQs using quantitative data and statistical analysis methods. By using quantitative data, it was possible to test for the statistical correlations between leader humour styles and effects on employees' work experiences, and how this relationship is affected by multimodal environments.

Altogether, the mixed methods approach was adopted in order to explore the research questions from two different lenses, to ensure that the study was able to provide a holistic basis for understanding multimodal leader humour and its effects of followers. This approach combined quantitative data for statistical insights and qualitative data for deeper contextual understanding, offering a framework for studying how leader humour operates across different communication channels and its impact on employee outcomes.

# 4 Study I: Qualitative Study

The goal of Study I was to function as an exploratory study to determine whether there are qualitative indications that the moderator effect actually exists. Additionally, Study I aims to identify which positive employee outcomes are most commonly associated with leader humour, and whether there were any employee outcomes which were not present in the existing literature. This was done so that the most pertinent aspects of leader humour could be investigated, and is an exploration of multimodal leader humour which could be used to construct a valid and reliable measurement tool for quantitative analysis. Study I consisted of two types of data collection, **Study Ia** (focus groups) and **Study Ib** (long form surveys).

Study I aimed to explore and identify key themes and dimensions of multimodal leader humour, in order to develop a valid and reliable measurement tool for quantitative data collection. The qualitative data was used to create a comprehensive understanding of how leaders use humour, how it is adapted over different communication channels, and how it affects followers. This study was reviewed and approved by the University of Twente's Ethical Committee Behavioural Management and Society (EC-BMS).

## 4.1 Method

### 4.1.1 Participants

Study Ia consisted of three semi-structured focus group interviews held with three to five participants in each group, for a total of 10 participants, all over the age of 19 working with a formalised leader for at least four months. These participants were all students at the University of Twente, recruited via the researchers' networks. A total of 10 participants were used over three focus groups, as information had reached saturation after these sessions (Hennink et al., 2019). The interviews were held for an hour each as a one-off and was purposefully open-ended to ensure a large range of answers were possible.

Study Ib was an open-ended survey with eight long form questions all based on the interview structure. It was completed by four working adults between the ages of 28 to 31, recruited via the researchers' networks.

### 4.1.2 Materials

The focus groups were recorded using an iPhone XR, transcribed using TurboScribe and manual editing, and encoded using ATLAS.ti's AI coding capabilities along with manual editing and organisation. The long form surveys were hosted on Microsoft Word documents, filled in individually, and also encoded with ATLAS.ti's AI coding feature.

The interview structure and questions were based on existing literature. The questions in Study Ia were specifically designed to be open-ended, such as "How does the use of multimodal humour by your leader affect the way you work?", with follow-ups being more specifically about certain effects such as team cohesion and LMX. Open-ended questions were chosen to allow participants to come up with their own answers, without being led in a certain direction based on the phrasing of the question (Esses & Maio, 2002). The full interview structure can be found in Appendix A.

Study Ib was a survey with eight long form questions based on the interview structure of Study Ia. Again, these questions were left open-ended to give participants the opportunity to

provide their own answers without excessive external prompting (Esses & Maio, 2002). Data from Study Ib was analysed alongside the data collected from Study Ia in order to find common themes on multimodal leader humour and its effects, by encoding them together and using the same coding scheme for both the focus group transcripts and long-answer surveys. The full survey can be found in [Appendix B](#).

### 4.1.3 Procedure

All of the participants in Study Ia had worked within teams with formal leaders and multimodal communication structures. Participants were deliberately interviewed in groups where they were not all colleagues, in order to ensure a more generalised set of data. For example, if all participants were only part of a single team with a particularly humorous leader, this could potentially skew the data to be much more positive about multimodal leader humour than in actuality.

For the focus group interviews, participants were given consent forms which provided information on the study and given the space to ask personal questions before the recording began. The focus group was led by the researcher following the focus group protocol, allowing participants to speak to each other in open discussion regarding the different topics.

Several significant differences that exist between student leaders and workplace leaders include a larger emphasis on hierarchy (on student teams everyone is a student, regardless of educational progress), financial circumstances, and larger cultural and age gaps. Therefore, Study Ib was developed to gain insights into how working professionals perceive multimodal leader humour. Participants were presented with information on the study and its purpose, and typed out their answers in long form for each question.

### 3.1.4 Data Organisation

The focus groups from Study Ia were transcribed and encoded with the answers from Study Ib using ATLAS.ti and its AI coding feature. This initially generated 219 individual codes. These were subsequently scanned in order to ensure their accuracy and significance, and removed if redundant, resulting in a total of 125 codes.

The Gioia method was used to organise the data (Gioia et al., 2013). This method was chosen in order to ensure that the conclusions drawn from the first study were rooted in data. The first-order concepts were determined by ATLAS.ti's initial encoding of the documents, which were then clarified further manually. Similar codes were grouped together and redundant codes, such as 'No Code Applicable', were removed. From these first-order concepts, second-order themes were determined based on where the first-order concepts shared similarities. Then, these second-order themes were grouped together into aggregate dimensions.

### 4.2 Results

Participants highlighted how humour aided leadership, what kind of characteristics different leaders had which lead to humour moments, how humour changed based on communication channel, and the different effects humour had on followers. Generally, humour was seen as a positive characteristic of leadership, especially when utilised to ease the communication of difficult messages and to build rapport/morale. In line with MRT, most participants noted that humour was most prevalent in FTF contexts, and did not occur as much or as effectively

in CMC. One focus group participant mentioned that "I think our digital communication is mostly used for informing people." and that "expressions put a lot of context to jokes and sometimes in digital things you can't really do that and things can get more misinterpreted". Similar sentiments were shared by other participants, as CMC was deemed more appropriate for reminders and formal information. This was also seen in the long form surveys, where one participant noted that "by email he [my boss] is way more serious". Distinctions were made between the different communication channels as well, with participants noting how their leaders used humour in group chats on WhatsApp and Microsoft teams but rarely used humour via email.
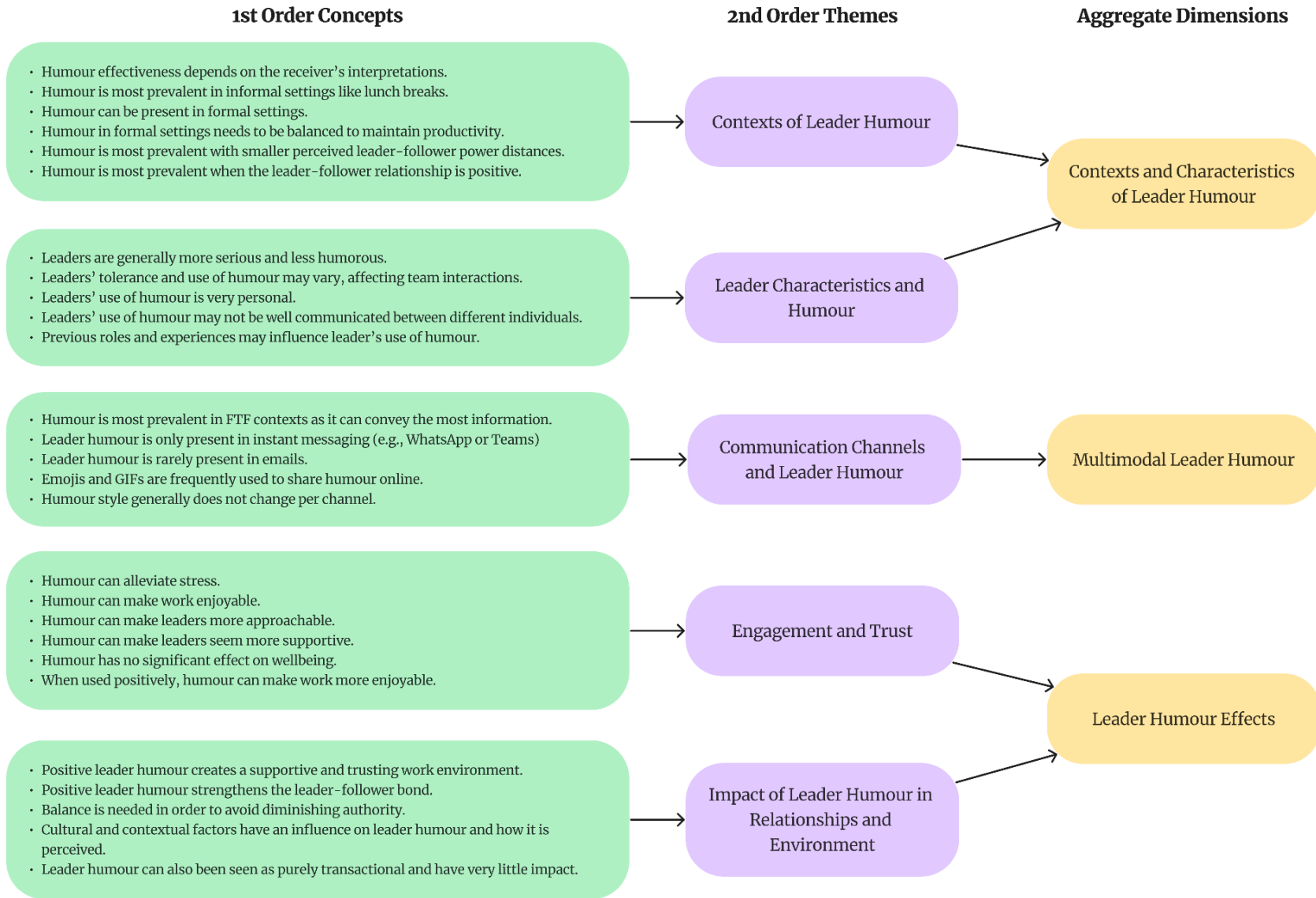
The difference between working professionals and students was highlighted when considering the prior relationships between leader and follower and the hierarchical differences between both parties, or lack thereof, in many student teams. One student mentioned that "There is no strict hierarchy. There's just one person above us who meets with all the other people that the team has to meet with and does the speeches, but they are not actually above you". Many students already had prior relationships with their leaders, and when they did not, the power distance was perceived as much smaller than for working adults. Another distinction between students and working professionals was the perceived magnitude of the effects of leader humour.

Participants of both the focus groups and long form survey mentioned different effects that positive leader humour had on them. Negative humour was rarely mentioned. One survey participant shared "he lets people making [*sic*] jokes and laugh at it so he is allowing [*sic*] good mood. He is perceived as sympathetic, trusted, and it's easy to ask for help for example". Within focus groups, similar sentiments were shared, with one participant sharing "whenever they [their leaders] joke, I think it's more to lighten the tough message a little bit. I think they're very successful most of the time".

Wellbeing was not a prominently discussed effect of leader humour. While participants recognised the potential effect of leader humour on their wellbeing, many found it too complex to describe the relationship as a correlation. Students tended to share the sentiment that leader humour had a significant influence on their relationship to the leader. Conversely, several working professionals shared how their leaders' use of humour did not affect their work at all, though they did emphasise how leader humour had an effect on their perception of their leaders.

Based on the code schemata, a data structure was created resulting in a grounded model of 18 first-order concepts, 5 second-order themes, and 3 aggregate dimensions, as summarised in Figure 4. The identification of these concepts, themes, and dimensions was done manually. The AI-generated codes served as an initial framework for manual coding. These AI codes were reviewed for their relevance, and additional manual codes were incorporated when the AI did not identify certain aspects.

**Figure 4**: *Grounded Theory Model*

**1st Order Concepts**

- Humour effectiveness depends on the receiver's interpretations.
- Humour is most prevalent in informal settings like lunch breaks.
- Humour can be present in formal settings.
- Humour in formal settings needs to be balanced to maintain productivity.
- Humour is most prevalent with smaller perceived leader–follower power distances.
- Humour is most prevalent when the leader-follower relationship is positive.

- Leaders are generally more serious and less humorous.
- Leaders' tolerance and use of humour may vary, affecting team interactions.
- Leaders' use of humour is very personal.
- Leaders' use of humour may not be well communicated between different individuals.
- Previous roles and experiences may influence leader's use of humour.

- Humour is most prevalent in FTF contexts as it can convey the most information.
- Leader humour is only present in instant messaging (e.g., WhatsApp or Teams)
- Leader humour is rarely present in emails.
- Emojis and GIFs are frequently used to share humour online.
- Humour style generally does not change per channel.

- Humour can alleviate stress.
- Humour can make work enjoyable.
- Humour can make leaders more approachable.
- Humour can make leaders seem more supportive.
- Humour has no significant effect on wellbeing.
- When used positively, humour can make work more enjoyable.

- Positive leader humour creates a supportive and trusting work environment.
- Positive leader humour strengthens the leader-follower bond.
- Balance is needed in order to avoid diminishing authority.
- Cultural and contextual factors have an influence on leader humour and how it is perceived.
- Leader humour can also been seen as purely transactional and have very little impact.

**2nd Order Themes**

- Contexts of Leader Humour
- Leader Characteristics and Humour
- Communication Channels and Leader Humour
- Engagement and Trust
- Impact of Leader Humour in Relationships and Environment

**Aggregate Dimensions**

- Contexts and Characteristics of Leader Humour
- Multimodal Leader Humour
- Leader Humour Effects

Based on the qualitative data and analysis, the conceptual model was refined. Results from Study I revealed that participants perceived communication channel richness as directly influencing the effectiveness of leader humour. Leader humour was generally found to have the most significant impact on LMX, work engagement, and leader trust. Therefore, these dependent variables were chosen as the focus of Study II. These findings are specific to semi-virtual teams, as fully virtual teams were not included in the data collection. The refined conceptual model is presented in Figure 5.

*Figure 5: Refined Conceptual Model*
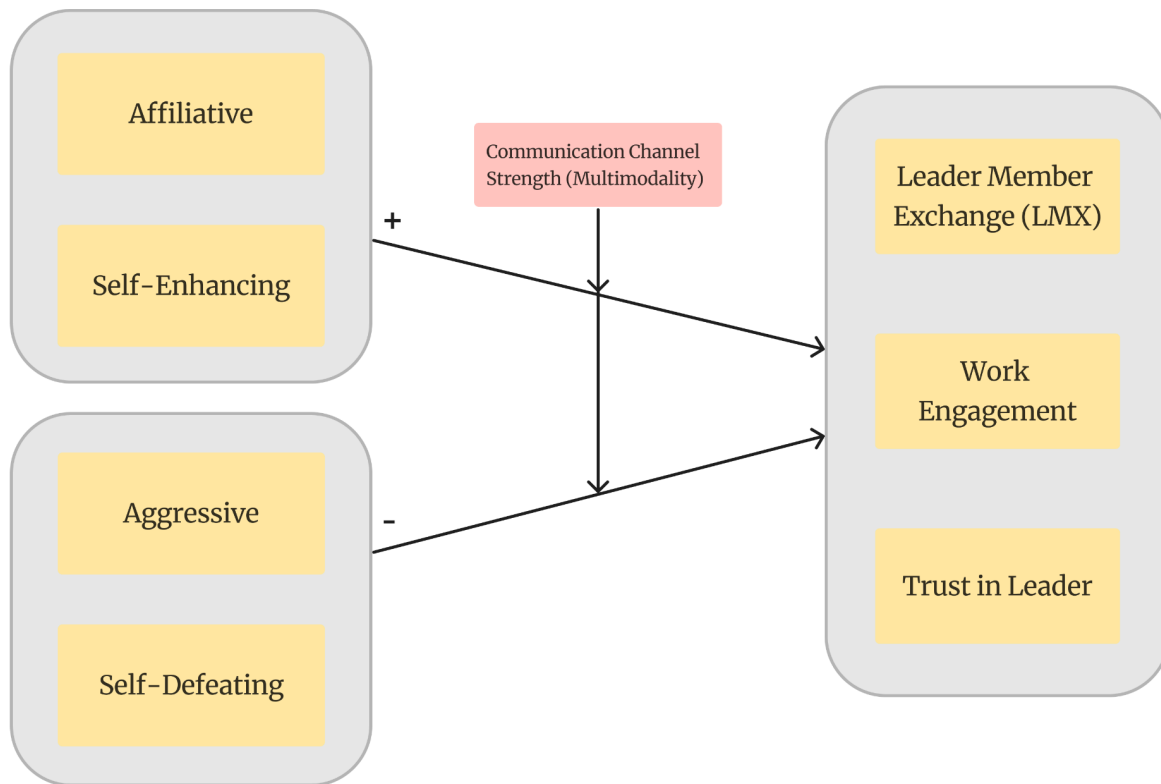


The results of the qualitative data collection were used as a basis for the selection of effects and corresponding scales and creation of new items for the quantitative data collection. This led to the following hypotheses regarding multimodal leader humour:

**H1a***: Affiliative leader humour has a positive relationship with LMX, work engagement, and leader trust.*

**H1b***: Self-enhancing leader humour has a positive relationship with LMX, work engagement, and leader trust.*

**H1c***: Aggressive leader humour has a negative relationship with LMX, work engagement, and leader trust.*

**H1d***: Self-defeating leader humour has a negative relationship with LMX, work engagement, and leader trust.*

**H2a***: Communication channel strength moderates the relationship between affiliative leader humour and LMX, work engagement, and leader trust, such that the positive relationship is stronger when the communication channel strength is high.*

***H2b****: Communication channel strength moderates the relationship between self-enhancing leader humour and LMX, work engagement, and leader trust, such that the positive relationship is stronger when the communication channel strength is high.*

***H2c****: Communication channel strength moderates the relationship between aggressive leader humour and LMX, work engagement, and leader trust, such that the negative relationship is stronger when the communication channel strength is high.*

***H2d****: Communication channel strength moderates the relationship between self-defeating leader humour and LMX, work engagement, and leader trust, such that the negative relationship is stronger when the communication channel strength is high.*

The three dependent variables are collected together as they are all positive employee outcomes which should be affected in the same direction for each perceived humour style.

# 5 Study II: Quantitative Study

**Study II** was devised to test and validate the conceptual model devised from Study I. The goal of Study II was to provide statistical insights on the relationship between perceived leader humour styles and employee effects, and to determine whether communication channel strength moderated these relationships. This was completed using a multiple choice questionnaire, created from four existing scales and additional self-created questions. This study was reviewed and approved by the University of Twente's Ethical Committee Behavioural Management and Society (EC-BMS).

## 5.1 Method

### 5.1.1 Participants

Participants for Study II were recruited via convenience and snowball sampling. All participants were over the age of 18, completed a consent form, and were able to withdraw at any point before submitting their responses. The total sample size was 74 participants.

### 5.1.2 Materials

The survey consisted of a total of 37 items. Four existing scales were used for the independent and dependent variables, with some being modified slightly to fit the research question better: short work-related Humour Styles Questionnaire (12 items), Leader-Member Exchange scale (7 items), Utrecht Work Engagement Survey (9 items), and Trust in Leader scale (4 items) (Bartram & Casimir, 2007; Domínguez-Salas et al., 2022; Graen & Uhl-Bien, 1995; Scheel et al., 2016). A complete overview of the measures for the independent and dependent variables can be found in [Appendix C](). The control and moderator variables were tested using a total of 5 items.

**Perceived Humour Styles**
The perceived leader humour styles were measured using a modified version of the short work-related humour styles questionnaire (swHSQ) , which itself is a modified version of the humour styles questionnaire (R. A. Martin et al., 2003; Scheel et al., 2016). A short version of the HSQ was used to prevent fatigue in participants and has been well-established and validated. The original items in the swHSQ are all self-reported. Therefore, each item was modified to allow participants to answer based on personal observations. This leads to scores for each of the perceived humour styles: affiliative, self-enhancing, aggressive, and self-defeating. Answers in this section are given in a 5 point Likert scale, from Strongly Agree to Strongly Disagree. Examples of modified items include "My leader does not have to work very hard at making my colleagues laugh - they seem to be a naturally funny person" from "I do not have to work very hard at making my colleagues laugh - I seem to be a naturally funny person" and "If my leader doesn't like someone at work, they often use humour or teasing to put them down" from "If I don't like someone at work, I often use humour or teasing to put them down". These changes alter the scale from testing the participants' self-reported personal view of their own humour style to the self-reported perceived view of their leaders' humour style.

**Leader-Member Exchange (LMX)**
LMX was measured using LMX-7, with modified statements to allow participants to answer on a 5 point Likert scale, from Strongly Agree to Strongly Disagree (Graen & Uhl-Bien, 1995).

Examples of items include "I usually know how satisfied my leader is with what I do" and "I would characterise my working relationship with my leader as extremely effective".

**Work Engagement**
Work engagement was measured using the Utrecht Work Engagement Scale (UWES-9), which is a simplified version of UWES-17 (Domínguez-Salas et al., 2022). Similarly, a shortened version was used as it has been widely utilised and validated and to ensure that participants did not get fatigued with too many items. Participants answered on a 5 point Likert scale, ranging from Strongly Agree to Strongly Disagree. Examples of items include: "I am enthusiastic about my job" and "I am proud of the work that I do".

**Leader Trust**
Leader trust was measured using the Trust in Leaders scale, which is a 4 item scale measured on a 5 point Likert scale, ranging from Strongly Agree to Strongly Disagree (Bartram & Casimir, 2007). Examples of items include "I feel quite confident that my leader will always try to treat me fairly" and "My leader can be relied on to uphold my best interests".

**Communication Channel Strength**
The measurement of communication channels is typically done categorically. However, for the purposes of this study, multimodal humour is best measured as a continuous variable because it is assumed that the relationship between the different variables can be described using a linear regression. As communication gets richer, the effects of leader humour on followers should get stronger.

Each participant was asked to rank how much they communicated with their leaders using five communication channels: face-to-face, video conferencing, phone calls, text messaging (e.g., WhatsApp or Slack), and emails. These five communication channels were chosen because they are the most prevalent leader-follower communication, allow for immediate and rich exchanges required for humour, and support the dynamic nature of leadership.

Participants' rankings resulted in five self-reported perceived usage percentages. In order to produce a single figure for each participant, a set of strength multipliers was created, based on the media richness theory and the characteristics of successful communication of humour (Daft & Lengel, 1986; D. M. Martin et al., 2004). The first four media richness characteristics as outlined by Daft and Lengel (1986) are: (a) ability to handle multiple cues simultaneously; (b) ability to facilitate rapid feedback; (c) ability to establish a personal focus; and (d) ability to use natural language. Four additional characteristics have been included to provide a more in-depth measure for the ability of a specific medium to facilitate humour: (a) ability to use body language; (b) ability to use verbal tone; (c) ability to use facial expression; and (d) ability to use gestures (Ziv, 1985). Significantly, the scale of strength multipliers is not equidistant, as they have different capabilities and varying media richness characteristics. For example, FTF communication and video conferencing are much closer in media richness than video conferencing and phone calls, as FTF and video conferencing vary by one media richness characteristic, while video conferencing and phone calls vary by two. This leads to FTF communication getting a strength multiplier of 1, video conferencing a 0.875, and phone calls getting a 0.5. An overview of the strength multipliers can be found in Table 1. The final Communication Channel Strength score is measured by adding up the product of each usage percentage by their corresponding strength multiplier, resulting in a score from 0 to 100.

**Table 1**: *Overview of Strength Multipliers*

| Media Type | Media Richness Characteristics | | | | | | | | Strength Multiplier |
|---|---|---|---|---|---|---|---|---|---|
| | Ability to handle multiple cues simultaneously | Ability to facilitate rapid feedback | Ability to establish a personal focus | Ability to utilise natural language | *Ability to use body language** | *Ability to use verbal tone** | *Ability to use facial expression** | *Ability to use gestures** | |
| Face to Face | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 1 |
| Video Conferencing | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | 0.875 |
| Phone Call | | ✓ | ✓ | ✓ | | ✓ | | | 0.5 |
| Text Messaging | | ✓ | | ✓ | | | | | 0.25 |
| Emails | | | | ✓ | | | | | 0.125 |

*denotes a Media Richness Characteristic adapted from Ziv (1985)*

The higher a participants' score is, the richer their overall communication is with their leader. A higher score can only be gained when using communication channels with more media richness characteristics, therefore a participant who communicates primarily FTF will have a higher score, while a participant who communicates primarily via email will have a lower score. As all participants communicated over multiple channels, the communication channel strength score gives an aggregate estimate of how rich and effective the overall communication is between leader and follower. This score reflects how effective multimodal communication environments can be at sharing information, with higher scores having more potential for complex messages and vice versa.

**Control Variables**
This study included four control variables: age, industry, experience, and prior contact. Age was measured using intervals to group participants into age groups, from 18-24, 25-34, 35,44, 45-54, 55-64, and 65 and up. Industry was categorically measured using a list of different industries, including an "Others" option. Experience, defined as the amount of time spent at the current role, was measured using intervals, from 0-2 years, 3-5 years, 6-10 years, and 10+ years. Lastly, prior contact, defined as the amount of time the participants had worked with their direct leader, was also measured using intervals, from 0-3 months, 4-6 months, 7-12 months, 13-24 months, and 25+ months.

**5.1.3 Procedure**

Data was collected using an online survey hosted on Qualtrics XM. Participants were shown an introductory page regarding the purpose of the study and rights of the participant. Afterwards, participants were asked to provide consent to participate in the study. Respondents were first asked demographic questions, which includes age, industry, and prior experience. Additionally, the perceived usage percentages question was asked.

The following sections of the survey were the existing scales to measure perceived leader humour style, LMX, work engagement, and leader trust, shown to participants in that order. Each section was introduced separately explaining what was being measured. Additionally, a progress bar was shown at the top of each page to ensure that participants were aware of how far along they were, hopefully increasing the chances they complete the survey.

Once the survey was completed, a closing statement was presented and the response was recorded. Incomplete responses were discarded once new responses were no longer accepted. The final number of valid responses was 74. The visual layout of the survey can be found in Appendix D.

## 5.2 Results

### 5.2.1 Research Model

When collating all the statistically significant correlation coefficients, this is the resulting research model, as shown in Figure 6. Leader trust has the most correlations with leader humour, while work engagement and leader member exchange only correlate with one outward facing humour style. The model does not include communication channel strength as a moderator as it did not produce significant results.

*Figure 6: IV and DV research model*
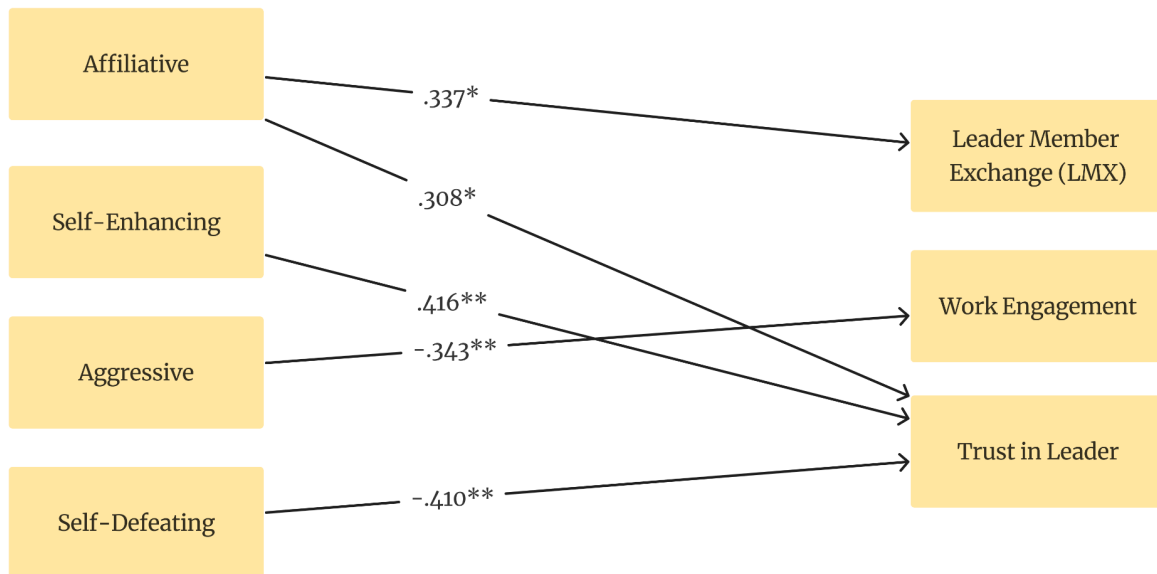


*\*. Correlation is significant at the 0.05 level (2-tailed).*
*\*\*. Correlation is significant at the 0.01 level (2-tailed).*

For the H1 hypotheses, all of the perceived humour styles have a partial correlation with each of the dependent variables. Conversely, none of the H2 hypotheses have any statistically significant correlations, thus being quantitatively insignificant. Therefore, all H1 hypotheses are partially supported, while the H2 hypotheses are not supported.

### 5.2.2 Internal Consistency of Scales

The Cronbach Alphas for each scale are shown in Table 2. All scales reach the requirement of $\alpha > 0.5$, except for Perceived Self-Defeating Humour. Additionally, the Perceived Aggressive Humour scale does not reach the $\alpha > 0.7$ requirement, indicating that it is also not a very consistent measure. These inconsistencies may stem from the existing internal discrepancies from R. A. Martin et al.'s (2003) Humour Styles Questionnaire (HSQ), as indicated by Silvia and Rodriguez (2020). Additionally, self-defeating humour relies a lot on the source's view of themselves, which the participants did not have access to. Some of the items for Perceived Self-Defeating Humour, as shown in Appendix C, could be misinterpreted as self-deprecating humour instead of self-defeating humour, therefore reducing the internal consistency. Additionally, the adaptation from testing the participant's humour style to testing the participant's perception of their leader's humour style may have caused some inconsistencies to surface or be inflated. These scales were used because they were previously validated by

Scheel et al. (2016), where the internal consistencies for aggressive humour and self-defeating humour at work were both $\alpha > 0.6$. However, the original short work-related Humour Styles Questionnaire (swHSQ) scale had worse internal consistencies for maladaptive humour styles than adaptive humour styles (Scheel et al., 2016).

***Table 2****: Cronbach's Alpha for Independent and Dependent Variables*

| Variables | Cronbach's Alpha ($\alpha$) | Nr. of Items |
|---|---|---|
| Perceived Affiliative Humour | .83 | 3 |
| Perceived Self-Enhancing Humour | .74 | 3 |
| Perceived Aggressive Humour | .51 | 3 |
| Perceived Self-Defeating Humour | .41 | 3 |
| LMX | .85 | 7 |
| Work Engagement | .87 | 9 |
| Leader Trust | .82 | 4 |

### 5.2.3 Descriptive Statistics

The correlation matrix is shown in Table 3, depicting the means, standard deviations and correlations of all continuous variables in the study. As expected, age is positively correlated with experience and prior contact (i.e. time spent with the current leader), and experience is positively correlated with prior contact. When considering communication strength, it is only significantly positively correlated with LMX, and not with any other variable.

For the perceived humour styles, affiliative and self-enhancing humour are positively correlated, as predicted for positive humour styles. Additionally, affiliative, self-enhancing, and aggressive humour are all positively correlated with self-defeating humour, although to a lesser degree than the adaptive humour styles are correlated with each other.

Affiliative and self-enhancing humour are both positively correlated with LMX, work engagement, and leader trust. Affiliative humour is most strongly correlated with LMX, as this humour style focuses on enhancing the relationship with others, while self-enhancing humour is most strongly correlated with leader trust, as this style focuses on enhancing the self. Conversely, aggressive humour is negatively correlated with work engagement. Additionally, all employee effects are positively correlated with each other, with LMX and leader trust having the strongest relationship. As each of them increase, the other employee effects increase accordingly.

***Table 3****: Means, standard deviations, and correlations among studied variables*

| Variables | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Age[a] | 2.50 | 1.43 | - | | | | | | | | | | |
| 2. Experience[b] | 2.00 | 1.05 | .51** | - | | | | | | | | | |
| 3. Prior Contact[c] | 3.50 | 1.43 | .65** | .53** | - | | | | | | | | |
| 4. Communication Strength | 62.07 | 17.40 | -.11 | .05 | -.13 | - | | | | | | | |
| 5. Affiliative | 3.35 | .83 | .04 | .04 | .02 | .17 | - | | | | | | |
| 6. Self-Enhancing | 3.02 | .76 | -.13 | -.01 | -.03 | .07 | .67** | - | | | | | |
| 7. Aggressive | 2.20 | .75 | .05 | .09 | -.12 | .01 | .12 | .14 | - | | | | |
| 8. Self-Defeating | 2.56 | .71 | .08 | .12 | -.07 | .13 | .45** | .45** | .38** | - | | | |
| 9. LMX | 3.75 | .60 | -.12 | .09 | .12 | .30** | .41** | .37** | -.03 | .09 | - | | |
| 10. Work Engagement | 3.58 | .61 | .10 | .19 | .14 | .22 | .32** | .32** | -.26* | .12 | .48** | - | |
| 11. Leader Trust | 3.89 | .70 | -.23 | -.13 | -.11 | .19 | .38** | .42** | -.17 | -.10 | .61** | .43** | - |

[a] *Age was measured in intervals: 18-24, 25-34, 35-44, 45-54, 55-64, 65+.*
[b] *Experience (time spent in current role) was measured in intervals: 0-2 years, 3-5 years, 6-10 years, 10+ years.*
[c] *Prior Contact (amount of contact with current leader) was measured in intervals: 0-3 months, 4-6 months, 7-12 months, 13-24 months, 25+ months.*

*\*. Correlation is significant at the 0.05 level (2-tailed).*
*\*\*. Correlation is significant at the 0.01 level (2-tailed).*

### 5.2.4 Hypothesis Testing

This section presents the moderation regression analyses for each dependent variable, in order to test the hypotheses in this study. Moderation analyses were completed using IBM SPSS 22, where the product of the mean centred independent and moderating variables were used as the interaction terms to test for and statistically significant moderation.

The regression analyses can be found in Table 4 for LMX, Table 5 for work engagement, and Table 6 for leader trust.

Affiliative humour is positively correlated with LMX and statistically significant ($\beta$ = .377, p < 0.05). Affiliative humour is also positively correlated with leader trust ($\beta$ = .308, p < 0.05), though it is a weaker correlation and significance than source-directed humour styles. Affiliative humour is not correlated with work engagement. Therefore, H1a is partially supported.

Self-enhancing humour is positively correlated with leader trust ($\beta$ = .416, p < 0.01), as this humour style targets the leader's positive sense of self and perceived self-confidence. It does not correlate with LMX or work engagement. Therefore, H1b is partially supported.

Aggressive humour is negatively correlated with work engagement ($\beta$ = -.343, p < 0.01). As a leader has a more aggressive humour style, work engagement decreases. Aggressive humour is not correlated with LMX or leader trust. Therefore, H1c is partially supported.

Self-defeating humour is negatively correlated with leader trust ($\beta$ = -.410, p < 0.01), as this humour style targets the leader's negative sense of self and perceived self-confidence. It does not correlate with LMX or work engagement. Therefore, H1d is partially supported.

For all H2 hypotheses, there was no evidence showing correlation between the interaction terms and LMX, work engagement, or leader trust. Therefore, communication channel strength shows no evidence of moderating any relationships between perceived leader humour styles and employee outcomes. All H2 hypotheses are not supported.

***Table 4****: Regression Coefficients from Moderated Regression for LMX*

| Variables | LMX | | | |
|---|---|---|---|---|
| | $\beta$ | $\beta$ | $\beta$ | $\beta$ |
| | (Step 1) | (Step 2) | (Step 3) | (Step 4) |
| **Control Variables** | | | | |
| Age | -.358* | -.324* | -.282 | -.287 |
| Industry | .028 | .008 | .036 | .011 |
| Experience | .101 | .113 | .055 | .075 |
| Prior Contact | .306 | .257 | .303* | .299 |
| **Independent Variables** | | | | |
| Affiliative | | .377* | .315* | .323* |
| Self-Enhancing | | .140 | .176 | .152 |
| Aggressive | | -.017 | -.003 | -.035 |
| Self-Defeating | | -.115 | -.135 | -.100 |
| **Moderator Variable** | | | | |
| Communication Channel Strength (CCS) | | | .260* | .268* |
| **Product Terms** | | | | |
| CCS * Affiliative | | | | .231 |
| CCS * Self-Enhancing | | | | -.193 |
| CCS * Aggressive | | | | -.081 |
| CCS * Self-Defeating | | | | .026 |
| $R^2$ | .087 | .275 | .336 | .364 |
| $\Delta R^2$ | .034 | .185** | .242 | .226 |

*^. Correlation is significant at the 0.10 level (2-tailed).*
*\*. Correlation is significant at the 0.05 level (2-tailed).*
*\*\*. Correlation is significant at the 0.01 level (2-tailed).*

***Table 5****: Regression Coefficients from Moderated Regression for Work Engagement*

| Variables | Work Engagement | | | |
|---|---|---|---|---|
| | $\beta$ | $\beta$ | $\beta$ | $\beta$ |
| | (Step 1) | (Step 2) | (Step 3) | (Step 4) |
| **Control Variables** | | | | |
| Age | -.006 | .102 | .132 | .153 |
| Industry | .024 | .036 | .057 | .056 |
| Experience | .109 | .142 | .100 | .051 |
| Prior Contact | .087 | -.033 | .000 | .033 |
| **Independent Variables** | | | | |
| Affiliative | | .156 | .111 | .130 |
| Self-Enhancing | | .269^ | .295^ | .247 |
| Aggressive | | -.343** | -.333** | -.348* |
| Self-Defeating | | .020 | .006 | .037 |
| **Moderator Variable** | | | | |
| Communication Channel Strength (CCS) | | | .188^ | .209^ |
| **Product Terms** | | | | |
| CCS * Affiliative | | | | .039 |
| CCS * Self-Enhancing | | | | -.225 |
| CCS * Aggressive | | | | -.098 |
| CCS * Self-Defeating | | | | .137 |
| $R^2$ | .028 | .255 | .287 | .315 |
| $\Delta R^2$ | -.028 | .163** | .187 | .166 |

^. *Correlation is significant at the 0.10 level (2-tailed).*
*. *Correlation is significant at the 0.05 level (2-tailed).*
**. *Correlation is significant at the 0.01 level (2-tailed).*

***Table 6****: Regression Coefficients from Moderated Regression for Leader Trust*

| Variables | Leader Trust | | | |
|---|---|---|---|---|
| | $\beta$ | $\beta$ | $\beta$ | $\beta$ |
| | (Step 1) | (Step 2) | (Step 3) | (Step 4) |
| **Control Variables** | | | | |
| Age | -.257 | -.101 | -.076 | -.071 |
| Industry | .020 | -.008 | .008 | .061 |
| Experience | -.042 | .029 | -.005 | -.074 |
| Prior Contact | .088 | -.098 | -.071 | -.013 |
| **Independent Variables** | | | | |
| Affiliative | | .308* | .272^ | .309* |
| Self-Enhancing | | .416** | .437** | .384* |
| Aggressive | | -.112 | -.103 | -.060 |
| Self-Defeating | | -.410** | -.421** | -.470** |
| **Moderator Variable** | | | | |
| Communication Channel Strength (CCS) | | | .151 | .157 |
| **Product Terms** | | | | |
| CCS * Affiliative | | | | -.265 |
| CCS * Self-Enhancing | | | | .080 |
| CCS * Aggressive | | | | -.094 |
| CCS * Self-Defeating | | | | .088 |
| $R^2$ | .055 | .384 | .404 | .433 |
| $\Delta R^2$ | .001 | .308** | .321 | .310 |

^*. Correlation is significant at the 0.10 level (2-tailed).*
*. Correlation is significant at the 0.05 level (2-tailed).*
**. Correlation is significant at the 0.01 level (2-tailed).*

# 6 Discussion

Study I provided evidence suggesting the influence of communication channel strength on leader humour. Therefore, based on the Media Richness Theory, existing literature on leader humour, and results from Study I, it was hypothesised that communication channel strength plays a moderating role in the relationship between leader humour and employee effects, where the richer the medium, the stronger the relationship would be. However, Study II's results indicate that these hypotheses do not hold true, and there is no empirical evidence that communication channel strength (as measured in this study) moderates the relationship between any perceived leader humour style and any of the identified employee outcomes. It is found that while certain perceived leader humour styles affect LMX, work engagement, and leader trust within multimodal communication environments, there is no empirical evidence to show that these relationships are affected by communication channel strength.

## 6.1 Perceived Leader Humour Styles and Employee Effects

As mentioned previously, LMX only has a significant positive correlation with affiliative humour, which is in line with expectations based on the nature of this humour style. Affiliative humour is an adaptive humour style focused on strengthening the relationship with others, often leading to meaningful connections (R. A. Martin et al., 2003). The strength of this relationship ($\beta$ = .377, p < 0.05) can also be explained using existing sociological theories. Firstly, the social exchange theory (SET) can shed some light on why this relationship is significant and positively correlated (Blau, 1964). According to SET, low-quality relationships are "largely based on economic exchanges" and are mostly transactional, while high-quality relationships are "based on social exchanges that generate a sense of obligation, gratitude, and trust, as well as respect, liking, contributions and loyalty" (Blau, 1964; Cooper et al., 2018, p. 770; Liden & Maslyn, 1998). When applying SET to leader humour, it can be seen as a social exchange resource to build relationships. As effective use of affiliative humour tends to bring people together, it follows that it helps create a respectful and positive environment, leading to positive LMX. The broaden-and-build theory can also be used to understand leader humour as a method to induce positive emotions, leading to enhanced relationships (Fredrickson, 2001). According to the theory, "positive emotions not only help individuals build high-quality relationships with others but also help them engage in adaptive coping and adjust to stress" (Cooper et al., 2018, p. 771; Fredrickson, 2001). Using this lens, leader humour can also be seen as a socio economic resource, inducing positive emotions using affiliative humour and building high-quality relationships, resulting in increased LMX because of positive social exchanges.

As for work engagement, the only statistically significant relationship found was a negative correlation between perceived aggressive humour and work engagement ($\beta$ = -.343, p < 0.01). When work engagement is high, employees have a sense of service, obligation, and commitment to the organisation, based on the resources available to positively develop their careers. Aggressive humour tends to have the opposite effect of affiliative humour, as it is a maladaptive humour style where the user attempts to enhance the self injuriously, often at the expense of others (R. A. Martin et al., 2003). Aggressive humour decreases the quality of the leader-follower relationship and decreases engagement. According to affective events theory (AET), "occurrences or events at work result in prompt positive or negative affect in the employees" (Goswami et al., 2016, p. 1085). Within AET, positive affect influences work engagement and attitudes, where "emotions at work mediate the relationship between work

environment and work outcomes" (Goswami et al., 2016, p. 1085; Weiss & Cropanzano, 1996). The same effect is found in the results, albeit in the opposite direction, with negative affect (aggressive humour) negatively influencing work engagement. All other perceived humour styles did not have a significant effect on work engagement, potentially because the positive effects from affiliative and self-enhancing humour and negative effects from self-defeating humour could be negligible in work environments when other events prompt positive employee affect more prominently. For example, working conditions allowing employees to personally influence stress management, crafting jobs based on an employee's "personal abilities and preferences", and maintaining not only a humorous relationship with a leader but also approaching work tasks playfully, all have more positive effect on work engagement than perceived humour styles (Bakker, 2022, p. 44; Knight et al., 2017). Aggressive humour may have a strong negative effect because it creates an unsupportive and discouraging work environment.

Leader trust has significant correlations with three perceived humour styles: affiliative, self-enhancing, and self-defeating humour. As predicted, leader trust has the strongest relationships with source-directed humour styles (self-enhancing humour: $\beta$ = .416, p < 0.01; self-defeating humour: $\beta$ = -.410, p < 0.01). According to R. A. Martin et al. (2003), source-directed humour reflects the source's underlying trust in themselves. Self-defeating humour comes across with a lack of self-confidence and an air of neediness, leading to employees' diminishing trust in their leaders, whereas self-enhancing humour has the opposite effect (An et al., 2023). The effect of source-directed humour on leader trust may be explained using role theory. Role theory considers most of everyday activity to be the acting-out of socially defined categories (Biddle, 1986). As such, employees' trust in their leaders depends on their perception of their leader's ability to 'perform' the role of a leader. These perceptions are based on the social skills and characteristics of a good leader, such as being an effective communicator, good decision making, and belief in the self (Biddle, 1986). Source-directed humour signals to employees, explicitly or implicitly, their leaders' perceived success in their own role, thus influencing the employees' trust in their leader. For example, self-defeating humour is an attempt to enhance the relationship with others at the injurious expense of the self, leading to a diminished perception of the source, thereby decreasing trust.

Affiliative humour also has a significant positive correlation with leader trust. This could be explained using role theory, where a leader who uses affiliative humour to "enhance [their relationship with their employees] in a benign and self-accepting" way is able to project the confidence and camaraderie expected of a leader (R. A. Martin et al., 2003, p. 52). Aggressive humour may not have an effect on leader trust because it may only affect an employee's perception of the leader as a person, and does not diminish their actual skills and competencies.

Therefore, it can be concluded that there is empirical evidence that the relationship between leader humour and positive employee effects (namely LMX, work engagement, and leader trust) stay the same when considering a purely FTF communication environment and a multimodal communication environment. Adaptive leader humour styles tend to have positive relationships with positive employee effects, while maladaptive leader humour has the inverse effect.

## 6.2 Communication Channel Strength

When considering communication channel strength as a moderator for this relationship, there is no significant result. However, as an independent variable, it does have significant positive correlation with LMX ($\beta$ = .260, p < 0.05), suggesting that it may have an influence on its own. When communicating via rich media, the social exchange may be of higher quality and induce more positive emotions as it is easier to connect and share complex messages, leading to an improved relationship. However, this study provides no empirical evidence that this also applies to leader humour. Neither work engagement nor leader trust produce any significant correlation with communication channel strength.

When extrapolating from MRT, it was hypothesised that media richness would have a moderating effect on the relationship between perceived leader humour styles and LMX, work engagement, and leader trust. The lack of significant quantitative results may be because of various reasons.

One explanation of the lack of significance may be due to the methodology used to measure communication strength. There may be inaccuracies in the perception of how much each communication channel is used. This is a subjective measure and depends on the participants perception of time spent communicating with their direct superior. Individuals can perceive time differently while at work, basing it on the "cues and stimuli emanating from the surrounding environment and the extent to which they capture and hold the individual's attention" (Blount & Leroy, 2007, p. 148). Employees may also value time differently, leading to inaccurate depictions of usage per communication channel.

Additionally, humour was not contextualised within communication channels when creating the communication strength score. While this was to ensure that the moderator variable would be measured independently and objectively, it can also be argued that the effective utilisation of leader humour and perceived leader humour style are two different variables. As mentioned previously, critics of the HSQ have argued that it does not reflect the motivation to share humour (Galloway, 2023). Effective usage and motivation are not measured in the HSQ, but may play an important role in the effect of communication channels on leader humour. When sharing humour online, it is often important to be able to recognise the intention and motivation behind messages as less information is afforded in poorer media (Yus, 2023). However, as this is not tested within the survey, this may be overlooked.

Furthermore, another potential explanation is the saturation of student responses instead of working professionals. Out of all 74 participants, 16 indicated that they were students leading to 22% of participants having a different kind of working relationship with their leader which may have influenced the data. Students were typically younger and are often more familiar with online communication and humour, potentially leading to less significance in media richness (Cruz-Moya & Sánchez-Moya, 2021). Additionally, students tend to work with other students, have different expectations of each other, and often have less emphasised hierarchies, which some humour researchers deem as too separate to analyse together (Rosenberg et al., 2021). Although students by no means dominate the sample, they do make up nearly a quarter of all respondents, which may have had an effect on the lack of significant correlations.

Regarding the statistical regression method implemented, the moderating effect of communication channel strength may also cancel itself out. As was previously hypothesised, the relationships between perceived leader humour styles and employee effects should be stronger as communication channel strength increases. However, as two humour styles are adaptive, and two are maladaptive, these relationships should be increasing the same magnitude in opposite directions, thereby potentially cancelling out and leading to no observable effect.

There is no empirical evidence showing that media richness has a moderating effect on the relationship between leader humour style and employee effects, contrary to what MRT would predict. However, due to existing theories and research on humour, leadership, and media richness, it is possible that the communication strength score did not accurately reflect multimodality within leader humour, or the concept was operationalised ineffectively. Although the communication channel strength score effectively captures the richness of all channels used in leader-follower communication together, it fails to consider the varying uses and frequency of humour across different channels. As humour becomes increasingly multimodal, both at work and in other contexts, this would need to be studied further.

The findings from the qualitative study provide evidence for the contrary, that communication channel does have an influence on leader humour and employee effects. Several participants shared how online communication channels were mostly used for discussions of logistics instead of socialisation, which led to an increase in humour in FTF contexts as there were far more informal interactions. These distinctions were not captured in the communication strength score, therefore making it difficult to draw conclusions regarding these insights. This may indicate that the nature of the interaction changes depending on the communication channel, causing humour to play a larger role in richer channels and a lesser role in poorer ones. This could also be an explanation for the absence of a moderator effect, as the communication channel strength measure does not include these distinctions.

When trying to give a definitive conclusion on whether multimodality has a moderating effect on the relationship between perceived leader humour and LMX, work engagement, and leader trust, the data collected in this study gives a conflicting response. While qualitatively, team members and followers seem to be able to outline distinctions when sharing leader humour through different channels, quantitatively this effect does not prove to be statistically significant. However, it is clear that perceived humour styles have a direct relationship with LMX, work engagement, and leader trust. According to this study, there is no empirical evidence that changes in communication channel strength have an effect on the relationship between leader humour and follower effects.

# 7 Theoretical and Practical Implications

## 7.1 Theoretical Implications

This study aimed to add to existing research on humour and leadership by integrating multimodal humour and media richness theory. While no significant quantitative results were found in this research, it can be seen as the first steps taken into the direction of making humour research more applicable to hybrid and remote work environments, as it attempted to operationalise multimodality in the context of leader humour.

This study confirmed existing relationships between leader humour styles and LMX, work engagement, and leader trust (Rosenberg et al., 2021). Additionally, it reaffirmed how employees' perception of leader humour styles influence these employee effects (Cooper, 2008). While this difference may seem minute, it is a change in perspective in the existing corpus of leader humour research, which has previously always focused on leaders' self reported humour styles, whereas this study focuses on how leader humour is perceived by followers (Rosenberg et al., 2021).

This study attempted to operationalise multimodality in the context of leader humour by creating a communication strength score. These were based on participants' perceived usage of communication channels and strength multipliers determined using the MRT media capabilities and humour communication capabilities (Daft & Lengel, 1986; Ziv, 1985). This method is one of various ways in which researchers could attempt to operationalise multimodality and has its benefits and drawbacks. It may potentially have oversimplified multimodality, but is able to capture how effective communication as a whole is between leader and follower based on MRT, while still being a fully independently measured variable.

## 7.2 Practical Implications

The findings of this study can be used primarily by managers and people in leadership positions looking to utilise humour to form better relationships with their subordinates. The study reemphasised the different ways perceived leader humour styles can influence LMX, work engagement, and leader trust. Each of these are positive employee effects which would be desirable in the leader-follower relationship. Humour use and style could be used as a method to connect with followers and decrease the power gap. Affiliative leader humour has positive correlations to LMX and leader trust, aggressive humour has negative correlations to work engagement, and source-based leader humour styles correlate to leader trust. These insights could be used by leaders to adjust their use of humour in order to form closer connections with their subordinates, build trust, and prevent loss of work engagement. For example, by adopting a more affiliative humour style, leaders may be able to improve LMX and leader trust. Similarly, by moving away from aggressive humour, leaders could increase work engagement. Generally speaking, adaptive humour styles benefit the leader-follower relationship the most regardless of contexts.

While it was found that multimodality and communication channels may not have a significant moderating effect on perceived leader humour style and employee effects, it is still relevant for leaders to consider how different channels could be used to communicate with followers. Daft and Lengel (1986) outlined how different media is more appropriate for different kinds of messages, with richer mediums better suited for more complex information. Although the quantitative portion of this study does not indicate that multimodality moderates the relationship between leader humour and positive employee outcomes, many participants in Study I provided anecdotal opinions and beliefs of leader humour only being used a substantial amount in FTF contexts. This knowledge may provide more context for the statistical results and may indicate how important it is for managers to understand when and where to appropriately use humour.

# 8 Contextual Exploration

The exploration will be guided by the question: *How could other academic disciplines of fields feed into or profit from your work and how could this work (potentially) be of use to society on a smaller or larger scale?*

This study focuses on connecting three disciplines: leadership, humour, and multimodality. While leadership and humour has been studied quite closely for the last few decades, the introduction of multimodality is fairly new and is the main exploratory focal point of this research. Various methodological disciplines were also encountered during the course of this project, including linear regression modelling, data encoding, and gathering both quantitative and qualitative data. By attempting to connect these fields using a variety of methodologies, this project aims to reach an interdisciplinary look at multimodal leader humour.

## 8.1 Potential Application in Various Disciplines

Several fields could potentially benefit from this research. A particularly prominent group of disciplines are teaching, therapy, and healthcare. These industries could benefit from understanding how to use humour to create stronger relationships, engagement, and trust beyond a work environment. This research provides insight into how different perceived humour styles affect these facets, and learning how to utilise humour in an empowering and positive manner may make these interactions more effective.

Considering the significant digitalisation of many traditionally offline services, this research may also play an important role in the transition to a digital, computer-based society. Many educational institutions offer virtual or semi-virtual options, companies have started offering virtual therapy in the form of services like BetterHelp or private online sessions, and healthcare providers now offer telemedicine consultations (Almathami et al., 2020; Geller, 2021; Willermark & Islind, 2022). The adjustment of these services to online environments requires delicacy and deliberate engagement with what works and what does not work, including the communication of humour and the (potentially) different effects it has when compared to in-person interactions.

### 8.1.1 Education

Within education, teachers and students need to find ways to stay engaged and stimulated during online interactions, which may include facets of humour and sharing jokes. During COVID-19, many schools and universities needed to provide virtual lessons due to necessity, which came with corresponding opportunities and challenges (Gouseti, 2021). In a largely post-pandemic world, virtual schooling may still be used where appropriate, but the sense of community, togetherness, and camaraderie would need to be consciously implemented (Gouseti, 2021, p. 11). What differentiates schools from other work environments is that virtual learning is often considered as a last resort in emergencies (Gouseti, 2021). Students' development and learning benefits from in-person interactions and rich, complex communication. However, fully virtual schools often offer a better learning environment compared to physical schools that attempt to integrate online education (Kingsbury, 2021). When considering the use of humour in virtual education, this research may be taken into account, staying conscious of the effectiveness of different communication channels in

communicating humour from a hierarchical superior (in this case a teacher instead of a leader).

### 8.1.2 Healthcare

Virtual healthcare services have made it more accessible and possible for people to gain information from anywhere and seek psychological help, but can be seen as very different from traditional, in-person healthcare services. Similar to education, therapists needed to work online due to COVID-19 emergency responses, leading to different interpersonal interactions (Geller, 2021). Additionally, certain healthcare services, such as medical consultations, were also moved to virtual platforms to ensure lack of exposure to COVID-19, allowing patients to meet with doctors from their homes (Almathami et al., 2020). In a post-pandemic world, many of these options are still available and healthcare professionals communicate with their patients using a variety of communication channels. Laughter and humour are used to benefit patients, ranging from persons living with dementia, cancer patients, to persons with anxiety or depression, often utilised in offline contexts (Haire & MacDonald, 2021; Preksha, 2019; Zhao et al., 2019).

This research could be used to translate humour therapy and humorous communication between medical professionals and patients to new communication platforms, considering the effectiveness of different humour styles and types of jokes shared.

# 9 Limitations

## 9.1 Lack of Pre-COVID-19 Testing

This study was conducted post-COVID. Therefore, it is not possible to consider how attitudes towards multimodal leader humour compare between pre- and post-COVID work contexts. As many of the largest strides in accepting remote and hybrid work were made due to necessities regarding governmental mandates worldwide, it is highly likely that this shift also had an impact on humour within leadership. As the study was conducted in 2024, it can only assess the impact of multimodality on leader humour after the pandemic-induced shift to primarily remote work.

Due to these constraints, this study is only able to capture a snapshot of the aftermath of the COVID-19 pandemic's effects on multimodal leader humour and is unable to contextualise the findings within a pre-pandemic environment.

## 9.2 Poor Internal Consistencies of Scales

Both Perceived Self-Defeating Humour and Perceived Aggressive Humour received low Cronbach Alphas ($\alpha < 0.7$), indicating that they are not internally consistent. In future studies, these scales would need to be reworked to ensure that the perceived humour styles scores would be more consistent.

For self-defeating humour ($\alpha = 0.41$), the lack of consistency could be explained using the distinction between self-deprecating and self-defeating humour. The items, as shown in [Appendix C](#), can be interpreted as either type of humour. The distinction between self-deprecating and self-defeating humour is the source's sense of self and how this comes across (An et al., 2023). The items are currently phrased without an emphasis on this, instead focusing on the humour itself. Therefore, participants may have vastly different

scores for each of the items. Additionally, the transition from a self-evaluated scale to a perceived scale may have surfaced or magnified inconsistencies. While aggressive humour ($\alpha$ = 0.51) reaches the minimum Cronbach Alpha for acceptable reliability, it suffers from similar issues.

The conclusions drawn regarding perceived maladaptive humour styles may therefore be considered less reliable or valid than perceived adaptive humour styles. It may also be concluded that maladaptive humour styles are more complex to perceive and discern.

## 9.3 Limited Scope of Multimodal Leader Humour

This study provided a lens with which multimodal leader humour can be perceived from. While efforts were made to encompass the entirety of multimodal leader humour as a complex phenomenon, certain assumptions were made and constraints were put in place to operationalise it. However, this leads to a limited scope of multimodal leader humour, unable to capture several nuances of the relationship between leader humour and follower effects.

This study did not focus on fully virtual teams, instead opting to allow anyone with a formal superior to complete the survey. Within fully remote teams, FTF communication is rarely the main channel used between leaders and followers and therefore media effectiveness may be perceived differently (Ben Sedrine et al., 2020). This may also influence how humour is used and received.

Similarly, no distinction was made between formal and informal contexts. Leaders tend to use humour differently in meetings and in so-called 'water cooler' conversations, but tend to engage only in formal communication the poorer a communication channel becomes (Woo et al., 2023). By not creating a distinction between formal and informal leader-follower contexts, it is not possible to test for the effects of multimodal leader humour considering these contexts.

# 10 Future Research

The quantitative statistical analysis found no significant moderation effect on the relationship between perceived leader humour styles and LMX, work engagement, or leader trust. Therefore, it is tentatively difficult to draw definitive conclusions on this matter. It is important to consider that this study is a first attempt to integrate multimodality into humour studies and these counter-intuitive and incongruent results should be taken into account when researching this further.

The current corpus of research on multimodal communication (in any context) usually utilised qualitative research methodologies, and currently does not focus on humour in leadership contexts (García-Sánchez & Clouet, 2022; Grewal et al., 2022). While there has been research into the emerging culture of online humour, this is often applied to communities which emerged from or only exist in online contexts, and does not focus on relationships which transitioned from primarily FTF to hybrid virtual contexts (Cruz-Moya & Sánchez-Moya, 2021; Yus, 2023). In the future, it may be significant to research this in different areas, as more industries transition from purely FTF to virtual.

This study may benefit from a wider application and higher power. When applied to a wider pool of participants, it may be possible to form more significant conclusions. As leader humour applies to such a significant population, a larger sample size would be much more representative of an average experience, removing the effect of random differences from the population pool (Taherdoost, 2017). Therefore, future research should focus on increasing the amount of data collected to allow researchers to form more generalised conclusions.

The measures for Perceived Aggressive and Self-Defeating Humour would need to be reworked to be more consistent. These measures should capture the injuriousness of the maladaptive leader humour styles more than the current items, to reduce subjectivity of the scales.

Certain facets of multimodal leader humour could also be expanded upon. Leader humour can occur in formal (e.g. meetings) and informal (e.g. 'water cooler' conversations) contexts, which may have an influence on how humour styles are perceived over different communication channels. Additionally, the various demographic factors which influence leader humour perception should be considered, including, but not limited to, leader and follower genders, cultural contexts, and leadership style. For example, leader humour is more effective in building positive relationships when used in conjunction to a transformational leadership style (encouraging employees to grow and innovate) instead of a transactional one (focusing purely on the exchange of skills and resources) (Avolio & Bass, 1991; Goswami et al., 2016).

# 11 Conclusions

This study was conceived regarding the digitalisation of work environments, based on the findings in earlier research on the effects of leader humour on employees, in an attempt to integrate media richness into the existing research on humour within leadership. The qualitative study provided evidence for communication channels having an effect on the relationship between leader humour and employee effects, mostly based on participants' observations that leader humour was most commonly shared in-person. However, the subsequent quantitative study was unable to produce significant results based on these initial findings. While the relationship between leader humour and positive employee outcomes (LMX, work engagement, leader trust) stays practically consistent in multimodal communication environments, there was no empirical evidence that multimodality, as measured using communication channel strength, moderates this relationship.

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# Appendix A: Focus Group Interview Protocol

This section shows the version of the focus group interview structure used for all the focus groups in Study Ia.

**Revised Questions (and Basic Structure)**

This group interview is being conducted for my Bachelor's Capstone Project (a.k.a. the Bachelor's Thesis). My research focuses on understanding employees' (team members') experience of multimodality and leader humour, which is the use of humour by leaders across various communication channels, such as face to face, emails, video conferences, and instant messaging platforms.

This interview/focus group will last around 60 minutes, and will be audio recorded and transcribed in order to ensure accuracy of qualitative data.

**[sign consent forms]**

Do you have any questions regarding the consent form? [answer questions if any]
I will be proceeding with the audio recording now.

**[begin audio recording]**

## Introduction

**Team background**
- *Please state your age, describe your work experience and background, and your current position*

## Understanding Leader's Use of Humour

To start, we want to understand how your leader uses humour in different communication contexts, both face-to-face and digital. This will help us compare humour styles across various platforms.

### How do you experience your leader's use of humour through different channels?

**Humour in face-to-face interactions**
- *Does your leader use humour in face-to-face interactions? Can you provide examples?*

**Humour in CMC**
- *Does your leader use humour through digital communication platforms (e.g. WhatsApp, emails)? Can you provide examples?*

**Humour style comparison**
- *How would you describe your leader's humour style in face-to-face settings compared to digital platforms?*
- *Do you think your leader's humour stays the same or changes when using different communication channels? Why or why not? Can you provide examples?*

Next, we want to explore how your leader's use of humour affects team dynamics and individual well-being. This section focuses on understanding the broader impact of leader humour on the team environment and personal experiences. Think about how your leader's use of humour over multiple channels has affected you. Please remember to acknowledge the different communication channels in your answers.

# How does the use of (multimodal) humour by your leader affect the way you work?

### Team dynamics
- *How does your leader's humour impact team dynamics in face-to-face and online interactions?*

### Wellbeing
- *How does your leader's humour affect your overall well-being in face-to-face and online interactions?*

### LMX - Relationship and Trust
- *Does humour from your leader, across different channels, influence your relationship with them? If so, how?*
- Does your leader's use of humour across different channels affect your trust in them? If so, how?

### LMX - Effectiveness and Productivity
- *Does the use of humour by your leader help or hinder productivity overall? Does it differ between mediums (e.g., better face-to-face than over text message)? Can you explain why?*
- Through which mediums do you find your leader's humour most beneficial? Why?

### Additional effects
- *Are there any additional effects of your leader's humour in face-to-face or digital settings we haven't discussed?*

### Conclusion

### Final thoughts
- *Is there anything else you'd like to share about your experiences with your leader's use of humour?*

**[pause audio recording]**

Thank you all very much for your time and for your answers. If you have any further questions, please reach out to me. I will send a copy of my final research project when I complete it (around end June, early July).

# Appendix B: Long Answer Survey Structure

This section shows the version of the long answer survey structure used for all the written surveys in Study Ib.

**Introduction**
*This section will be used to understand the context of your answers.*

| |
|---|
| **Please state your age, describe your work experience and background, and your current position.** |
| |

**Understanding Leader's Use of Humour**
*This section is about understanding how your leader uses humour in different communication channels, spanning from face-to-face to emails to text messages. You do not need to discuss the effects of leader humour, please focus on describing leader humour. You may also answer that it is not very present in your work environment.*

| |
|---|
| **How do you experience your leader's use of humour through different channels?** |
| |
| **Does your leader use humour in face-to-face interactions? Can you provide examples?** |
| |
| **Does your leader use humour through digital communication platforms (e.g., WhatsApp, emails)? Can you provide examples?** |
| |

| Does your leader's use of humour change between different contexts or levels of formality? If so, how? |
|---|
|  |

| If applicable, does your leader's use of humour stay the same or change when using different communication channels? If so, could you provide some examples? |
|---|
|  |

**Impact of Humour on Team Members**

*This section is about exploring how your leader's use of humour (or lack thereof) affects different aspects of your work experience, such as team dynamics and individual wellbeing. These questions are meant to help understand the broader impact of leader humour on the team environment based on your personal experiences. Please think about how your leader's use of humour (over multiple channels) has affected you.*

| How does your leader's use of (multimodal) humour (or lack thereof) affect the way you work? |
|---|
|  |

These are some potential topics you could consider when writing out your answer:
- Team dynamics
- Wellbeing
- Relationship with the leader
- Relationship with fellow team members / employees
- Trust in the leader
- Effectiveness
- Productivity

**Additional Comments**

*This section is included if you have any other comments or questions regarding multimodal leader humour.*

| Is there anything else you'd like to share about your experiences with your leader's use of humour? |
| --- |
|  |

These are some additional factors which you may consider:
- Cultural differences
- Age differences
- Prior relationships with leaders
- Organisational structure
- Leadership style

# Appendix C: Measures of Studied Variables

***Table 7****: All the Measures of the Studied Independent and Dependent Variables*

| Construct | Item | Source |
|---|---|---|
| Perceived Affiliative Humour | My leader does not have to work very hard at making my colleagues laugh - they seem to be a naturally humorous person. | Adapted from Scheel et al. (2016) |
| | My leader enjoys making my colleagues laugh. | |
| | My leader can usually think of witty things to say when they're with my colleagues. | |
| Perceived Self-Enhancing Humour | If my leader is feeling depressed at work, they can usually cheer themselves up with humour. | Adapted from Scheel et al. (2016) |
| | If my leader is feeling upset or unhappy at work, they usually try to think of something funny about the situation. | |
| | If my leader is at work and is feeling unhappy, they make an effort to think of something funny to cheer themselves up. | |
| Perceived Aggressive Humour | If someone makes a mistake at work, my leader will often tease them about it. | Adapted from Scheel et al. (2016) |
| | If my leader doesn't like someone at work, they often use humour or teasing to put them down. | |
| | If something is really funny to my leader, they will laugh or joke about it even if someone will be offended. | |
| Perceived Self-Defeating Humour | My leader can often get carried away in putting themselves down if it makes my colleagues laugh. | Adapted from Scheel et al. (2016) |
| | My leader often tries to make my colleagues like or accept them more by saying something about their own weaknesses, blunders, or faults. | |
| | Letting others laugh at my leader is a way for my leader to keep my colleagues in good spirits. | |
| LMX | I usually know how satisfied my leader is with what I do. | Graen & Uhl-Bien (1995) |
| | My leader understands my job problems and needs a great deal. | |
| | My leader recognises my potential. | |
| | Regardless of how much formal authority my leader has | |

built into their position, they would use their power to help me solve problems in my work.

Regardless of the amount of formal authority my leader has, they would 'bail me out' at their expense.

I have enough confidence in my leader that I would defend or justify their decision if they were not present to do so.

I would characterise my working relationship with my leader as extremely effective.

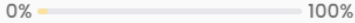| | | |
|---|---|---|
| Work Engagement | At work, I feel bursting with energy. | Domínguez-Salas et al. (2022) |
| | At my job, I feel strong and vigorous. | |
| | I am enthusiastic about my job. | |
| | My job inspires me. | |
| | When I get up in the morning, I feel like going to work. | |
| | I feel happy when I am working intensely. | |
| | I am proud of the work that I do. | |
| | I am immersed in my work. | |
| | I get carried away when I'm working. | |
| Leader Trust | I can trust my leader to make sensible decisions for the future of the company and/or team. | Bartram & Casimir (2007) |
| | I feel quite confident that my leader will always try to treat me fairly. | |
| | My leader would be quite prepared to deceive me for their own benefit. (r) | |
| | My leader can be relied on to uphold my best interests. | |

(r) denotes a reverse scored item.

# Appendix D: Visual Survey Layout

This section shows the layout of the Qualtrics XM survey seen by participants in Study II.

# Appendix E: Additional Demographic Factors

Demographic factors, such as gender or cultural background, can have a significant influence on multimodal humour. For example, the use of CMC humour specifically has significant differences based on whether users come from collectivist, high-context cultures, or more individualistic, low-context cultures (Yus, 2023). High-context cultures emphasise indirectness and rely on nonverbal cues to convey meaning, stemming from the values of subtlety within the culture (Park et al., 2014). Low-context cultures, such as Chinese culture, are often far more direct and dependent on language and its ability to convey a complete message, and are more concerned with saving face and avoiding negative feelings of shame (Togans et al., 2021). This leads to users from high-context cultures giving additional information and explanations when attempting to convey humour so as to avoid miscommunication. When considering these differences in CMC communication, "East Asians used significantly more CMC cues (emoticons and emoji) than Americans" in an attempt to communicate additional information for both general and humorous interactions (Togans et al., 2021, p. 285; Yus, 2023).

The current study took place in the Netherlands with a saturated sample size, as well as having a young participant base with the average age range being between 24 and 35 years old. This could lead towards bias in results and less generalisable findings.