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An exploration of the perceptions and effects of using humour in health and safety communication

This thesis is submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Organisational Health & Well-Being. The candidate has already achieved 180 credits for assessment of taught modules.

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Abstract

This thesis aims to explore the use of humour in health and safety communication and establish an understanding of how it is perceived and its potential effects in the workplace. A systematic search and then a thematic synthesis of the existing empirical qualitative literature on the use of humour between employees in workplace communication was conducted. The review produced four temporal themes (followed in a chronological pattern) that described how humour was used during an employee's organisational journey, and highlighted the lack of peer-reviewed literature on humour in health and safety communication. Key research gaps were identified, informing the rationale for the current research. This research aimed to answer the following questions: 1. What are the perceptions of health and safety practitioners and employees on the use of humour in health and safety communication?, and 2. What do health and safety practitioners and employees consider the effects of using humour in health and safety communication? Semi-structured interviews were conducted with 18 participants: 13 health and safety practitioners (deliverers of health and safety communication) and 5 employees (recipients of health and safety communication). Transcripts were analysed using Braun and Clarke's (2019) 6-step approach to thematic analysis. The resulting four themes were: (1) *The humorous robot – using humour to 'humanise' the formulaic nature of the role,* (2) *Awkward bedfellows? – humour's challenging relationship with health and safety*, (3) *Reading the room – the situational predictors of humour,* and (4) *More than a laugh – the enduring effects of humour.* This study makes a unique contribution by highlighting the role of humour in the evolving role of the health and safety practitioner. Significantly, humour conveyed the humanity of practitioners, their interaction with employees, while also improving compliance with health and safety rules. This study offers several implications for policy and practice, as well as future avenues of research. The findings provide the basis for future guidance for

practitioners on using humour and influencing preferred characteristics when recruiting practitioners.

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Author's Declaration

This thesis records the work undertaken for the PhD in Organisational Health and Wellbeing at the Division of Health Research at Lancaster University from September 2017 to May 2025.

The work presented here is the author's own, except where due reference is made. The work has not been submitted for a higher degree elsewhere. However, the literature review within this thesis has been published.

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Chapter 1 - Introduction

1.1 Overview

"There's no better policy in a society than pursuing the health and safety of its people" (Hirschkorn, 2015). To this end, the health and safety of people at work is enshrined in law and policy of countries around the world. To ensure that all workers are aware of such law and policy, clear and concise health and safety communication is essential to reduce the potential for injuries (Vecchio-Sadus, 2007). Previous research on workplace communication has identified the role of humour in such communication, exploring how humour is used in different industries (Clason, 2019; Watts, 2007), between genders (Eriksen, 2019), in workplace meetings (Kangasharju & Nikko, 2009) and its effects, such as increased knowledge retention (Huber, 2022) and creative problem solving (Huang et al., 2015). However, to the author's knowledge, the role of humour, specifically in health and safety communication, has not been subjected to empirical research. Therefore, this study aims to address this problem by exploring the perceptions of some of the people actively involved: health and safety practitioners and the recipients of their communication.

This chapter provides a brief overview of the key concepts of this study, i.e., health and safety, humour, workplace communication and humour in health and safety. The chapter concludes with the aims of this thesis and an overview of the forthcoming chapters.

1.2 Health and Safety in Context

The initial steps to improve the health and safety of people at work were taken over 200 years ago, mainly in industrialised countries such as the United States, Germany and the United Kingdom (UK) during the Industrial Revolution (Geraghty, 2007). In the UK, this began with government inspectorates, notably through The Factory Act (1833). Among other directives, it did not allow children under the age of nine to work in factories and factory walls required limewashing – a mixture of lime and water to improve appearance and reduce damp – once a year. The Factory Act (1833) also saw central government appointing factory inspectors to enforce the new legislation (Brabant, 2024). As further legislation followed in other industrialised nations, companies began to appoint safety officers – internal staff tasked with enforcing health and safety regulations. The American Society of Safety Engineers was established in the United States in 1911, demonstrating the first collective recognition of health and safety as a profession, while, in the UK, the British Industrial Safety First Association was established in 1918 (Hale et al., 2020). This was followed by the Industrial Safety Officers Section (ISOS) in 1945, which subsequently became the Institute of Occupational Safety and Health (IOSH), a chartered body that represents the largest network of UK health and safety professionals in the present day (Hale & Booth, 2019).

It is worth recognising at this point that the term 'health and safety' is relatively EU-centric, implying that professionals in the EU, including the UK, are responsible for both workers' health and safety (Provan et al., 2017). In other countries, just the term 'safety' may be used, suggesting that health hazards and their effects are managed by other professional groups (Hale et al., 2020). A variety of 'safety' or 'health and safety' titles have been assigned to occupational roles such as 'officer', 'adviser', 'engineer', 'manager', 'director' 'practitioner', 'professional' and 'technician' (Provan et al., 2017). Hale and Booth (2019) suggest a separation between tactical roles, for example, 'engineer' and 'technician' and strategic roles such as 'manager' and 'director'. This study uses the term 'health and safety' to describe the occupational field tasked with improving the health and safety of those at work, and 'health and safety practitioner' to identify the professional role which facilitates the health and safety of people at work.

The amalgamation of both occupational safety and occupational health in the UK began with the Robens Committee in 1972, which overhauled the outdated and prescriptive health and safety legislation at the time (Howells, 1972). The Robens Report culminated in the passing of the Health and Safety at Work etc. Act 1974, which is still the primary piece of health and safety legislation in the UK. The UK's membership of the European Union (EU) in 1973 also led to EU health and safety directives being introduced, which further increased regulation and improved health and safety standards in EU workplaces (Hale, 2019). Although the UK retained this legislation after leaving the EU in 2020, Moretta et al. (2022) suggest it is uncertain how the UK's self-regulation will affect health and safety legislation in the coming decades.

Furthermore, in June 2022 the International Labour Organization (ILO) – a United Nations agency dedicated to promoting social justice, and human and labour rights – added a fifth fundamental principle for rights at work for all global workers – a safe and healthy working environment (Brudney, 2022). This demonstrated the ILO's commitment to ensure the safety and health of all people at work, particularly as a recent ILO report (2023) estimated that in 2019 over 395 million workers worldwide suffered a non-fatal workplace injury, and 2.93 million people died because of workplace factors. In the UK, recent statistics produced by the Health and Safety Executive (HSE) reported that 138 people died in workplace accidents between April 2023 and April 2024); moreover, 1.7 million workers were suffering from work-related ill-health, 46% of which was mental health-related, costing the UK economy over 21 billion pounds (HSE, 2024). This suggests that further improvements are needed to protect people while at work.

1.3 Health and Safety Innovation

Although significant progress has been made over the last century in reducing workplace injuries and diseases, a noticeable plateauing of that progress has been recognised, particularly in high-income economies such as the United States (AFL-CIO, 2021) and the UK (HSE, 2021). Government agencies, professional bodies and organisations world-wide have strived to find new and innovative solutions to protect people's physical and psychological health while at work (Manuele, 2018). One such solution has involved the study of the role of human behaviour and human error as an antecedent to workplace accidents (Anderson, 2005). Further research has explored the effect of communication at work on human behaviour (Wachter & Yorio, 2014). For example, Wachter and Yorio suggested that increasing an organisation's level of engagement with workers had the potential to reduce negative outcomes such as workplace accidents. Humour has been suggested as a useful communicative tool for safety professionals in conversations with employees (Geller, 1994). However, its use and effects on health and safety communication – to the authors knowledge – have not been subjected to empirical research, despite it being investigated in other fields (see Chapter 2).

1.4 Humour and Humour Theories

Humour defies a universally accepted definition, partly due to its multidimensional nature and ability to produce both positive and negative responses (Mesmer-Magnus et al., 2012). Martin and Ford (2018) do clarify the stages of response to humour: a stimulus that a person perceives as funny (cognitive response), which then leads to mirth (emotional response) and finally to a physiological response such as a laugh or a smile. Furthermore, the identification of humour could be based on the speaker's intentions (Hay, 2000) or the listener's response (Taylor, 1974). In attempting to encompass all these aspects of humour this thesis has adopted the definition by

Nelson (2014) that "humour is identified by means of the speaker's supposed intention combined with the response to which the utterance gives rise" (2014, p. 7).

Martin (1996) identifies four distinctive humour styles that relate to the focus of the humour and its intended purpose. These are: affiliative – saying funny things to amuse others, improve relationships and ease tension; self-enhancing – a humorous outlook on life even in the face of adversity; aggressive – the use of sarcasm perhaps to ridicule others, possibly also with discriminatory undertones; and self-defeating – disparaging humour at one's own expense. Mathew and Vijayalakshmi (2017) adapted Martin's classification and categorised the styles as: healthy humour (affiliative and self-enhancing) as it leads to a positive state of mind, and unhealthy humour (aggressive and self-defeating) as it is considered detrimental to health (Martin & Ford, 2018).

To further our understanding of humour, several theories have been developed to explain both its purpose and basis. As early as the 4th century BCE Plato and Aristotle shared ideas regarding humour and its uses, for example, to gain power (Lintott, 2016). Berger (2017) suggests three theories have traditionally dominated: *superiority theory* (Gruner, 1997), *relief theory* (Shurcliff, 1968) and *incongruity theory* (Deckers & Devine, 1981). *Superiority theory* suggests that humour – beyond producing mirth – can create feelings of superiority for the speaker, by using humour to disparage others and gain a sense of power (Gruner, 1997). *Superiority theory* continues to be discussed in both theoretical research (Lintott, 2016) and empirical studies such as those related to organisational humour (Wolfgruber, 2023). During the 18th century CE, the ideas behind *relief theory* were developed, which put forward a further function of humour as a way to release one's negative emotions (Morreall, 1997). Shurcliff (1968) refined *relief theory*, explaining that humour serves to relieve the tension when an individual anticipates negative experiences. *Relief theory* has been utilised in research on how humour might be used to relieve the tension in workplace communication (Butler, 2015). *Incongruity* *theory*, in contrast, involves the nature of humour rather than its intentions. *Incongruity theory* suggests that we live in an orderly world with certain expectations and when those expectations are violated by incongruous events, laughter ensues (Morreall, 1997). Put simply, *incongruity theory* suggests that people find the unexpected funny (Deckers & Devine, 1981). Forabosco (2008) endorsed the continuing relevance of *incongruity theory* in humour-based research and a subsequent review by Mathies et al. (2016) found that incongruity-based humour was useful to build rapport in workplace communication.

Other theoretical work on humour includes *comprehension-elaboration theory* developed by Wyer (2003), which specifies the conditions under which individuals find humorous communication amusing or not. According to Cooper (2008), in this theory, amusement is determined initially by how difficult the humour is to understand and then by cognitive analysis of its social acceptability. *Benign violation theory* (McGraw & Warren, 2010) – similar to *incongruity theory* – suggests that humour that both violates expectations and is benign will result in mirth. These final two contemporary theories represent current cultural views toward humour – if humour is too offensive or harmful, it may not universally result in mirth (Warren et al., 2016). These traditional and contemporary theories reflect the complex and changing nature of humour and counter the views discussed by Linnot (2016) that all humour relates back to *superiority theory*. In addition, they can be mutually consistent within the multidimensional field of communication through humour.

1.5 Humour and Workplace Communication

Despite claims that all forms of humour relate back to *superiority theory,* Lintott (2016) argued that it was implausible for a single theory to explain the complexities of humour. Meyer (2000) suggested the several rhetorical functions humour can serve within communication were equally complex and that humour in workplace communication can simultaneously serve to: identify the speaker and enhance their credibility, clarify certain points, enforce norms by levelling criticism and differentiate themself from another group.

The use of humour within organisational communication has been found to have several benefits. Organisational communication is diverse in nature, involving upward, across and downward communication between levels of an organisation, electronic communication, for example, email and social media, and interpersonal communication between individuals and groups (Cacciattolo (2015). The use of humour within such contexts has assisted in the integration of new workers (Cooper-Thomas & Anderson, 2006), helped develop a sense of belonging (Tajfel & Turner, 1979) and improved group cohesion (Mesmer-Magnus et al., 2012). Workplace humour has also been associated with several health benefits, such as reduced depression, anxiety and stress for workers (Mesmer-Magnus et al., 2012). Cognitively, organisational humour has been shown to assist knowledge retention (Huber, 2022) and creative problem-solving (Huang et al., 2015) while still providing a means to exert power (Kassing & Kava, 2013). Collectively, these findings suggest that humour is a sophisticated means of discourse that can achieve several objectives during workplace communication while providing a variety of benefits.

To investigate the role of humour in workplace communication further, Plester (2016) recognised different organisational humour roles at work: 'jokers' (for example, group leaders) define the humour agenda; 'gatekeepers' (for example, human resource managers) delineate the barriers of acceptable humour; and, the 'disengaged' (for example, any employee) who may be the target of unhealthy humour (Mathew & Vijayalakshmi, 2017).

The disengagement experienced by some employees could be a result of being exposed to aggressive humour, which is considered detrimental to health (Mathew and Vijayalakshmi, 2017). Humour can stoke negative emotions such as anger and resentment (Huber, 2022) and be used to ridicule or mock others (Mumby, 2009). Yet even those negative sentiments can sometimes energise positive actions including social change (Fineman, 2006). While some evidence also suggests that the darker side of humour – which may include topics not conventionally seen as funny, for example, death and human suffering – can help employees cope with those stressful situations (Rowe & Regehr, 2010) although chronic use of dark humour may be detrimental to mental health (Mercer et al., 2024).

How an individual uses, receives and perceives humorous communication – positively and/or negatively – may depend on their personality. Goldberg's influential (1990) work on distinct personality traits has also been used to investigate relationships with particular humour styles (Plessen et al., 2020). Plessen's meta-analysis of 24 published research studies suggests the use of health-promoting humour styles (affiliative and self-enhancing) (see Section 1.4) has been related to extraversion, agreeableness, conscientiousness, and openness, while those using health-endangering humour styles (aggressive and self-deprecating) were linked to neuroticism (which involves a tendency for negative emotions and effects). This suggests that an individual's personality does have an influence on how they receive and perceive humour.

In their meta-analysis of occupational humour, Mesmer-Magnus et al. (2012) explored 49 independent studies and aimed to assist in operationalising workplace humour by exploring the effects of positive humour (self-enhancing and affiliative) in the workplace. They found that humour had positive effects on workers' physical and mental health and efficiency. Furthermore, they suggested a fruitful direction for occupational humour research would be to explore the role of humour in organisational teams and between co-workers. Huber's (2022) review, which drew on more than 200 books, chapters and journal articles, developed a conceptual framework that initially explains how workers make sense of organisational humour. Huber's six discursive practices then describe how humour is used. A further general review by Sizemore and O'Brien (2023) explored cognitive, social and contextual humour theories that relate to the workplace and described best practices for attempting humour and making something funny. The review included a suggestion that worker inductions and organisational training were suitable for using workplace humour, while using humour that was not harmful or offensive appeared most likely to invoke mirth. They also acknowledged that further research was needed to explore the social, health and cognitive benefits of humour in the workplace.

1.6 Health and Safety and Humour

To date, a relative lack of literature or guidance on humour within the field of health and safety communication is available. The following examples are exceptions. Research by Vecchio-Sadus (2007) on safety communication – which included a case study of a mineral organisation in Australia – suggests health and safety practitioners could use humour creatively to relieve tension. However, this suggestion was part of a general communication strategy and not subjected to empirical research. Similarly, in an article regarding safety communication strategies, Williams and Geller (2008) mention the use of appropriate and tasteful humour by health and safety practitioners, without a description of what that entails. Lundgren and MacMakin's (2013) guide to risk communication – a handbook for communicating workplace health and safety risks (available globally) – also acknowledges that having a sense of humour may help health and safety practitioners engage with workers. However, they caution that "keeping a serious tone is safest" (p. 113), due to the differing expectations of various audiences.

Anderson and Miller (2017), in their guide to health and safety communication, also suggest humour can be a good way to reach an audience, but acknowledge the potential for humour to be misunderstood and offend the recipient. Subsequently, they suggest that avoidance is the best policy. Such inconsistencies in existing literature and guidance, in part, stem from the uncertainty at present about how humour affects health and safety communication and those involved. To some extent, the inconsistency could be explained by the lack of both empirical research in this specific area and subsequent evidence-informed guidance for practice.

Consequently, it could be argued that the use of humour in health and safety communication presents an opportunity for more specific empirical investigation. Previous studies on occupational humour generally have found it can soften contentious statements (Grugulis, 2002), challenge authority (Holmes, 2000), gain the compliance of others (Mullany, 2004), help with socialisation and bonding (Ojha & Holmes, 2010), yet also reinforce stereotypes (Clason, 2019). However, we do not fully understand if such or similar conclusions would be equally relevant in health and safety communication. Therefore, while acknowledging the findings from occupational research generally, it is important to conduct research within the field of health and safety, particularly, to assess the role of humour in this specific area.

1.7 Thesis Aim and Structure

This thesis aims to address the above-noted gap in order to understand the perceptions of both health and safety practitioners and employees regarding the use of humour in health and safety communication, and answer two main research questions:

- What are the perceptions of health and safety practitioners and employees on the use of humour in health and safety communication

- What do health and safety practitioners and employees consider the effects of using humour in health and safety communication?

1.8 Thesis overview

This thesis is comprised of five chapters. This chapter has laid the foundation and set the context of the present research. Chapter 2 details the systematic review of the literature and provides a thematic synthesis of existing qualitative studies to explore the use of humour in employee-related workplace communication. The chapter identifies four temporal themes that describe how humour is utilised during employees' organisational transition. Chapter 3 covers the details of the methodology and methods used in this research study. Philosophical approaches are discussed, and a qualitative methodology and a reflexive thematic analysis (RTA) design were subsequently chosen. The choice of semi-structured interviews, and the data collection and analysis processes are discussed. Chapter 4 contains the findings of this research study. The chapter details four themes that were generated from the data analysis, which describe the experiences of participants regarding the perceptions and effects of using humour in health and safety communication. Finally, Chapter 5 discusses the research findings in the context of the wider literature and existing theories and the relative strengths and limitations of the study and its implications. The chapter concludes with the key findings of the study.

Chapter 2 - Literature Review

2.1 Overview

The subject of humour has produced several literature reviews. Existing humour-based quantitative systematic reviews have focused on gender differences regarding humour, in which men were found to be more likely to engage in aggressive humour (Hofmann et al., 2020), or based on humour styles and personality types, as mentioned earlier (Plessen et al., 2020). More specifically, in a work-based context, Mesmer-Magnus's (2012) review of 49 studies concluded that positive humour in the workplace led to enhanced work performance, job satisfaction and group cohesion. While these reviews have mostly synthesised quantitative research, which provided measurable data on humour and workplace communication, concurrently, qualitative reviews have also begun to emerge in this area. Such reviews have focused on the experiences of participants and have tended to focus on specific settings, such as the service industry (Mathies et al., 2016) and health care (Jones & Tanay, 2016; Pinna et al., 2018). These reviews concluded that while humour improved employee and customer relations, they aimed to understand the consequences of its use, such as its capacity to ridicule, offend and upset. In summary, the aforementioned reviews included between seven and 77 articles and discussed various findings from the use of humour. While quantitative reviews had a broader scope, looking at humour and associated phenomena, qualitative reviews focused on specific organisational settings. What is lacking is a complementary synthesis of qualitative research that may serve to provide further depth and rich insight from qualitative research designs (Malterud et al., 2015).

Consequently, the present qualitative systematic review aims to explore the use of humour between employees in workplace communication and rather than focusing on one organisational setting, it has a broader scope and will explore the use of humour across industries and countries. Mindful of the work of Alvesson and Sandberg (2011) and their focus on the potential of problematization – the need to challenge the assumptions of existing theoretical assumptions – this review interrogates the different theoretical perspectives relating to humour in the workplace. It is clear from the humour theories provided in the introduction to this thesis that they are largely descriptive and unpredictive. However, this approach further allowed for the exploration of workplace humour as a pan-cultural phenomenon, albeit with a recognition of nuanced intercultural differences (Jiang et al., 2019). However, it will focus solely on employee-to-employee communication within the chosen organisations, using the individual employee's experiences and perspectives to provide an employee-related review of organisational humour.

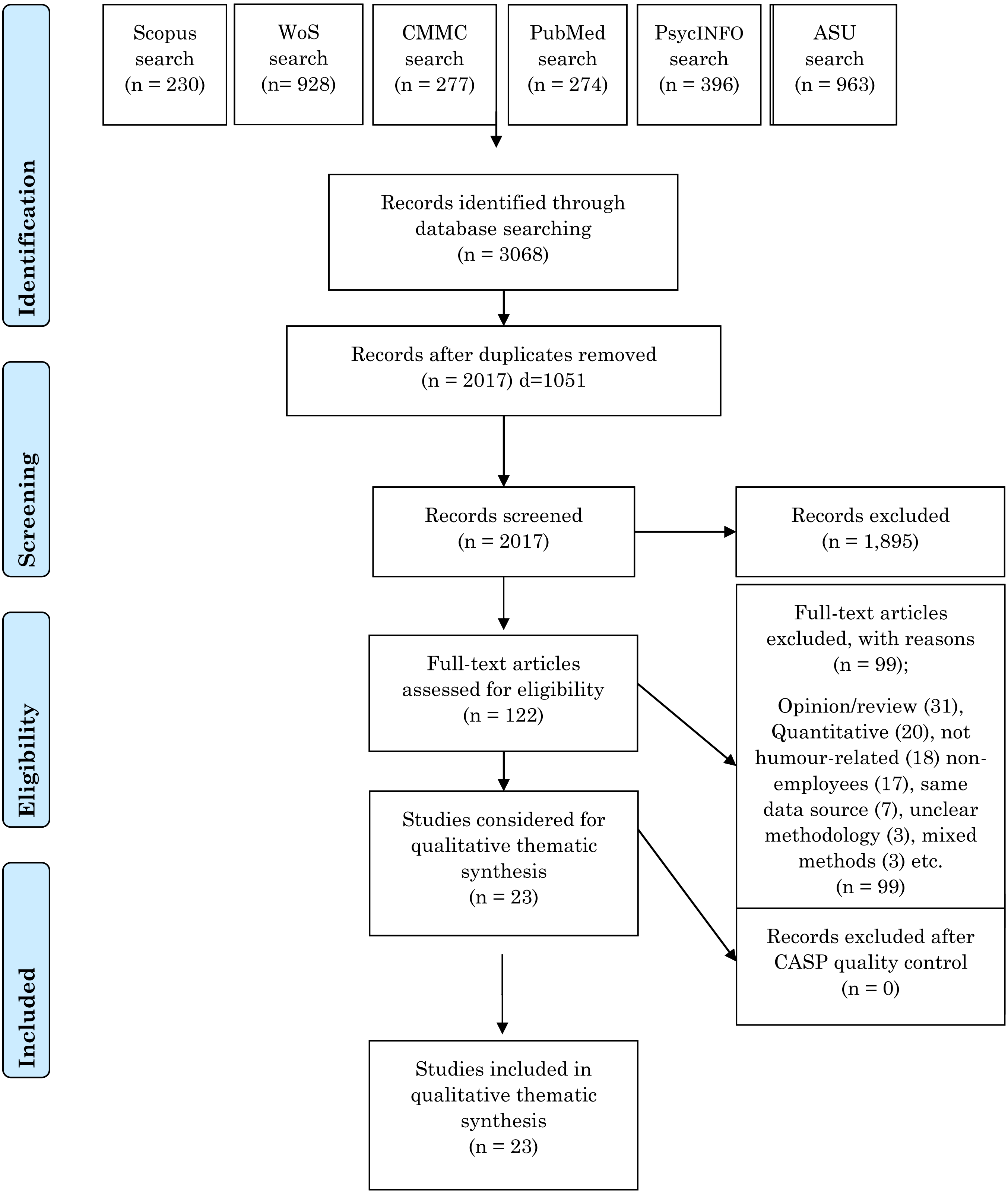
2.2 Method

2.2.1 Search Strategy

A mind map was initially used to develop the review question and identify key search terms; it provided a visual and creative radial diagram to explore the topic and sub-topics (Eppler, 2006). These search terms were refined with the assistance of an academic librarian, as were the chosen databases for the comprehensive literature search (Scopus, Web of Science, Communication & Mass Media Complete, PubMed, PsycINFO, and Academic Search Ultimate). Three core concepts were utilised: humour, communication and workplace, which both aligned with the review question and provided appropriate literature. The associated synonyms of each concept were added to searches in each of the six databases – while also making use of truncation to account for any spelling differences – and where possible using Medical Subject Headings (MeSH) terms (see Table A1 in Appendix A). Each concept was searched separately, then those searches were combined. The titles and abstracts were then reviewed to identify suitable papers. The searches were conducted on 13th August 2020. See Figure 1 below for the PRISMA flow diagram of the selection process.

Figure 1

Prisma Flowchart



From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009) *P*referred *R*eporting *I*tems for *S*ystematic Reviews and *M*eta-*A*nalyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

2.2.2 Eligibility of Studies

Papers were included for consideration using the following criteria: written or available in the English language (as a lone researcher the time and resources required to translate other papers was impractical); from a peer-reviewed journal, to confirm the credibility of findings; included humour as part of the research aim or questions; were in a workplace or organisational context; involved employee-to-employee communication in the workplace (to provide a specific focus on organisational humour), for example, in meetings, training and general conversation.

The exclusion criteria for this review included: books; reports, articles in non-peer-reviewed journals; review papers (systematic or narrative); opinion, theory or editorial papers; quantitative studies; multiple papers from the same study or database (to ensure codes and themes were not double-counted); studies that did not involve humour as part of the research; non-workplace contexts; communication with non-employees, for example, visitors, students, and customers (to ensure the humour remained employee-centric); qualitative studies that did not include quotes; and those without a named approach or method.

A total of 3,068 papers were identified using the six databases. Subsequently, 1,051 duplicates were then removed using Endnote software. The titles and, where necessary, the abstracts of the remaining 2,017 papers were then reviewed. This resulted in 122 papers, for which the full text was reviewed against inclusion/exclusion criteria. A total of 23 papers met the inclusion criteria and were included in the thematic synthesis (see Figure 1).

The exclusion of grey literature was a difficult choice. The basis of the decision was that such literature may have added a higher risk of bias due to potential flaws in the study (Balshem et al., 2013). By contrast, peer-reviewed articles have already been assessed for quality, and practically, were sufficient in number not to require alternative data sources.

2.2.3 Quality Appraisal

Contrasting views have been expressed on whether or not quality appraisals should be used to exclude papers in qualitative research reviews (Carroll et al., 2012; Spencer & Ritchie, 2011). However, following the thematic synthesis approach of Thomas and Harden (2008), in which quality assessment is a recognised step in the process, all papers were assessed for quality. This approach aimed to provide an objective measurement that minimised potential bias by ascertaining the respective strengths and weaknesses of each study. While some authors choose to exclude articles on a quality basis (Carroll et al., 2012), Sandelowski and Barroso (2003) would argue that the inclusion of all studies also reduces a potential source of bias, that of excluding on quality alone.

The Critical Appraisal Skills Programme (CASP) (2018) was used to assess the quality of studies. The CASP tool was considered appropriate due to both its wide use and its measure of methods, ethics and rigour to assess credibility (McKnight et al., 2019). It includes 10 questions, two of which were for screening out inapplicable studies; the remaining eight questions are considered important to determine the specific strengths of qualitative research, such as research design, data collection, analysis, and ethics. The widely used three-point scoring system (Duggleby et al., 2012; Feder et al., 2006) was applied to the eight questions. A weak score (one point) was applied if there was no mention or explanation of the issue. A moderate score (two points) was awarded if the issue was discussed but not fully explained. A strong score (three points) was applied when the issue was fully explained and justified. An overall score was then calculated for all eight questions with a maximum score of 24. The scores for the 23 studies ranged from 14 – 22. This was to provide some measure of quality and not necessarily to exclude papers. The score could be affected by several factors, for instance, papers subjected to word limits by a journal may result in a lower score (Atkins et al., 2008). Additionally, three of the included studies were assessed by another researcher for the purposes of inter-rater reliability. Each answer to the eight CASP questions was compared, producing a good inter-rater agreement of over 80% (Barth et al., 2017).

All 23 papers were subjected to line-by-line coding according to the thematic synthesis approach of Thomas and Harden (2008). Subsequently, all papers added codes to the overall synthesis, and although some studies did not richly add to the depth of the subsequent themes, their nuanced views provided a more complete review of the subject (Verhage & Boels, 2017). The characteristics and CASP scores of the 23 studies are summarised in Table 1.

2.2.4 Analysis and Synthesis

The thematic synthesis approach of Thomas and Harden (2008) was followed. The synthesis was comprised of three stages: (1) line by line coding of the findings in included papers, (2) development of descriptive themes, by collating and merging codes to provide collective meaning across the papers and (3) synthesis of these descriptive themes into analytical themes. The resultant themes provided an interpretation of the findings that go beyond those contained in the original papers.

2.2.5 Data Extraction

In line with the approach of Thomas and Harden, 'data' were taken to be sections labelled 'results' or 'findings', this included direct quotes from participants and the researchers' own interpretations. However, due to the variety of reporting styles within the included literature, 'findings' that represented new concepts or details were also discovered in abstracts and discussion sections, as also found by Rathbone et al. (2017).

As mentioned above, line by line coding was then carried out on the 23 included papers. This was performed with the assistance of (Version 12) software (see example in Appendix B). Codes were developed inductively (from the bottom-up), in what was an iterative process in which the codes were renamed, merged, and reviewed. Once the initial coding was complete, all findings were then re-read to ensure all coding had been applied correctly across the papers. This was particularly important with the initial papers to be reviewed, as codes developed later in the review also applied to these earlier papers.

Table 1

Characteristics of included studies

Author/ Date	Design and Methodology	Focus of study	Sample and setting	Data collection methods	Findings / Implications	CASP Score
Charman (2013)	Ethnography	To explore the nature of humour within policing and ambulance work, which are linked by their focus on emergency work	22 ambulance staff and 23 police officers in the South of England	Semi-structured interviews	It helped to understand the relationship between two emergency services through the use of humour	19
Chefneux (2015)	Interactional approach	To study the uses and functions of humour between team leaders and members in a multinational company	24 members of staff with participants from Belgium and Romania	Transcripts from phone conferences and face-to-face meetings	Humour is more prevalent in face-to-face meetings. Humour is for transactional & relational goals	17
Clason (2019)	Tension-centred approach / constant comparative method analysis	To examine sexual harassment, humour and organisational tension	20 employees (various roles) in manufacturing organisations in the USA	In-depth interviews	Males used humour to reinforce masculinity in a manufacturing workplace	22
Eriksen (2019)	Feminist approach with narrative analysis	Examines humour as an emergent theme within a long-term study of females in wildfire control	19 female fire-fighters. Australian outback	Semi-structured interviews	Humour enables flexibility and personal disclosure to manage gendered power relations	22

Author/ Date	Design and Methodology	Focus of study	Sample and setting	Data collection methods	Findings / Implications	CASP Score
Grandi et al. (2019)	Ethnography with template analysis	Investigate the use of humour in environments where employees are constantly exposed to death	55 employees (various roles). Funeral services in North west Italy	Semi-structured interviews (23) and focus groups (7)	Linked themes to pre-existing humour styles. Affiliative, self-enhancing & cynical	19
Grugulis (2002)	Ethnography	Explores the use of humour in management training within organisations	Managers undertaking training in three UK public sector organisations	Participant observation, transcription of field notes and interviews	Humour allows contentious statements without fear, & serious messages are hidden within jokes	14
Heiss and Carmack (2012)	Interpretive approach with constant comparative method analysis	Explored how humour was used by employees to negotiate the entry of newcomers	13 employees (various roles). University counselling service provider in USA	Participant observation (58 hrs) and semi-structured interviews (8)	Newcomers & existing staff used humour to co-construct organisational norms & expectations	19
Holmes (2000)	Ethnography and politeness theory-based analysis	Examines verbal humour used in interactions within professional workplaces	Employees (no number) in four government agencies in New Zealand	Work-related meetings recorded by participants	Humour is used both to exert superiority & to challenge it in a socially acceptable way	21
Kangasharju and Nikko (2009)	Conversation analysis approach	Analyses joint laughter & humour in meetings	Employees from two large organisations in Finland & Sweden	Five video-taped meetings	Humour and laughter serve a number of roles within meetings	17

Author/ Date	Design and Methodology	Focus of study	Sample and setting	Data collection methods	Findings / Implications	CASP Score
Leith and Yerbury (2017)	Practice theoretical approach with content analysis	Explores the extent to which humour is associated with knowledge sharing and role it plays in practice	Project team members (various roles). Local government project team in Australia	9 project team meetings audio recorded	Humour is used to manage a paradox of new and more traditional ways of working	20
Lynch (2009)	Ethnography with constant comparative method analysis	Explores the use of humour in workplace organizing	12 employees (various roles). Hotel restaurant kitchen in the USA	Participant observation (1 year). Active interview method (12) – three rounds	How chefs use humour to shape their processes and maintain professional autonomy	20
Mak (2012)	Communities of practice approach and analysis	Case study of how a newcomer uses humour to integrate to a new workplace	Three participants at a holding company in Hong Kong	Audio recording of participant interactions and face-to-face interviews	Humour is a critical element of negotiating a new workplace, discovering the acceptability of humour	15
Martin (2004)	Grounded theory	Explores the role of conversational humour and links organisational status, gender and paradox	165 (7) employees. A zoo in the USA	Observation (6 months), Meetings (recorded), Interviews (7)	Female middle-managers using humour to negotiate managerial identity and organisational life	20
Moody (2014)	Interactional sociolinguistic approach	Explores the use of humour by an intern	One participant. A manufacturing company in Japan	Observation (2 days) and Interview	Co-construction of the 'Gaijin' (foreigner) stereotype using humour that created solidarity & broached a language barrier	20

Author/ Date	Design and Methodology	Focus of study	Sample and setting	Data collection methods	Findings / Implications	CASP Score
Mullany (2004)	Ethnography and analysis based on conceptualisations of politeness approach	Examines the relationship between gender, politeness and power and how humour is used to gain compliance	51 participants from (1) a retail company and (2) a manufacturing company. Both based in the UK	Business meetings (6) (recorded).	Female chairs using repressive humour to gain compliance of their subordinates.	19
Nelson (2014)	Ethnography	How humour and swearing are used to build relationships between co-workers	Five participants at major company in Sweden	Semi-structured interviews (5) and observation	Humour and swearing help to integrate employees where a language barrier exists	18
Ojha and Holmes (2010)	Ethnography of communication and inductive analysis	Examines humour as a way of communicating within an organisation (joking, sarcasm and teasing)	All office staff at a construction company in Mid-West USA	Semi-structured interview (4) and observations (3 months)	Humour and laughter contributed to understanding each other and strengthened group norms and bonds	22
Richards (2010)	Linguistic ethnography and micro-interactional analysis	Focuses on the back-region humour of two different organisational settings	School and agricultural settings in the UK	Observations (12 weeks) & (1 week), meeting recordings and interviews	Shows how the locus of linguistic ethnography can be shifted to directly compare two groups	18
Siegman (2020)	Ethnography and analysis based on multiscalar concepts of power and domination	Explores the playful antagonism between Palestinians and Israelis	Employees at an Israeli-owned settlement supermarket in Israel	Participant observation and field notes	Humour is a way of discussing political domination and antagonism in a volatile environment	17

Author/ Date	Design and Methodology	Focus of study	Sample and setting	Data collection methods	Findings / Implications	CASP Score
Teng-Calleja et al. (2015)	Conversation analysis approach	Examined the role of humour in wage bargaining conversations	Various staff members at a beverage company in the Philippines	Meetings (9) recorded	Humour was used to maintain intergroup harmony, subvert authority and control the negotiations	19
Tracy et al. (2006)	Ethnography	Explores how humour enables human service employees to manage identity and make sense of their work	109 participants across four human service organisations in the USA	Observations and in-depth interviews (40)	Humour appears to help employees persist in jobs that might otherwise be insufferably identity threatening	20
Watts (2007)	Ethnography and thematic analysis	Focus on three humour effects: (1) as resistance, (2) as refuge, (3) as exclusion	31 participants in a civil engineering company in the UK	Semi-structured interviews (31)	Humour plays a significant part in maintaining the discursive normativity of masculinity in construction	18
Yedes (1996)	Discourse analytical approach	Examines teasing amongst diverse staff in meetings	Employees at a homeless organisation in the USA	Transcripts from six staff meetings between 1992 and 1993	Teasing provides a humorous reminder of egalitarian relationships. That no one is better than anyone else	16

2.3 Results

The resultant themes provided an interpretation of the findings that went beyond the contents of the 23 papers, while also staying close to the purpose of the review to understand better the use of humour between employees in workplace communication.

The thematic synthesis included papers published between 1996 and 2020. The research settings were varied: seven studies were conducted in the US, five studies in the UK, two in Australia, and others in Romania and Belgium (same study), Japan, Italy, New Zealand, Sweden and Finland (same study), Sweden, Israel, Hong Kong, and the Philippines. Workplace contexts included construction, hospitality, finance, education, retail, manufacturing, funeral services and emergency services. Participant sample sizes ranged from 1 – 165. Methodologically, 12 (over half) of the studies used ethnographic approaches. The immersion of researchers in those ethnographic studies subsequently assisted in the development of themes, by allowing close contact with employees and exposure to the humour shared between them.

The collective meaning derived from the synthesis describes a temporal transition utilising humour as a key tool to establish an employee's place within the organisation and to negotiate the day-to-day processes within it. This formation of themes to fit a temporal structure has been previously used to describe experiences of diseases, for example, in a thematic synthesis of dementia (Bunn et al., 2012) and a thematic analysis of HIV (Heiland et al., 2002). The thematic synthesis process led to the following analytical themes that describe the temporal transition of employees in an organisation: 1. Initiation into organisational humour; 2. Joining a 'tribe' – in-groups and out-groups; 3. Exerting influence – humour as power; and 4. Using the safety valve – humour to relieve tension.

2.3.1 Initiation into Organisational Humour

This theme outlines how humour was utilised within organisations to both select and acclimatise new employees. It initially served to highlight a rapport, or not, between the new employee and existing staff at the organisation. Once in position, new employees then used humour to cultivate working relationships, while existing staff inducted new employees into organisational humour norms. Humour also provided a non-confrontational means of pointing out mistakes made by the new employee.

Even before individuals were appointed by an organisation, it appeared that the humour of prospective candidates was being assessed at the interview stage. At this point, humour served as a gatekeeping function. For example, one interviewer said: “It’s our way of saying who we want to work with… For me, if they ain’t funny, I’m going to say no” (Heiss & Carmack, 2012, p. 121). This highlights the perception of humour as a desirable attribute in fellow employees.

When employees first joined an organisation, it was often unclear what to expect and how to discover organisational norms. From the outset, humour was used to induct new staff into those organisational norms (Mak et al., 2012). It was for newcomers then to interpret this humour, understand their role within it and react accordingly (Nelson, 2014). This involved an element of risk on behalf of the newcomer, whereby they discovered the boundaries of acceptable humour, which might involve checking the reaction of colleagues and superiors to the injection of humour (Martin, 2004). In some instances, this humour failed, due to a newcomers’ lack of understanding regarding their status and the target of the humour. One participant in Heiss and Carmack’s (2012) study said:

> Sometimes we talked about funny stories from before they [newcomers] got here. Then they told a joke about it. We got all protective and told them “no, that’s not

your story to joke about. They weren't here for it, why should they get to joke it up? (p. 121).

However, although it appears mistakes could be made about when it was appropriate to use humour, as above, work-based errors made by new staff offered the opportunity for humour to be used as a learning tool, for example, to highlight mistakes in a non-confrontational way and to aid organisational integration. Another participant said: "Teasing is a way to say 'you're doing something wrong' without just saying it" (Heiss & Carmack, 2012, p. 116). This lessens the emotional impact of highlighting a weakness (Heiss & Carmack, 2012). Lynch (2009) also found this served to provide the newcomer with the professional norms of the role.

As a result of such learning, newcomers adapted humour styles to 'fit in' with the specific organisational humour. Particular examples of this were: making jokes about bodily functions (Siegman, 2020), sharing funny social media videos with colleagues (Heiss & Carmack, 2012) or females in a masculine environment taking on a traditionally male humour style. As one female factory worker remarked: "I'll just muck in and be one of them" (Watts, 2007, p. 261). These actions served to cement organisational belonging and a new-found solidarity with one's colleagues (Heiss & Carmack, 2012; Ojha & Holmes, 2010). However, this adaptation of humour style also represented a potential erosion of individual identity, as workers sacrificed personal humour traits to align with organisational norms.

2.3.2 Joining a Tribe – In-groups and Out-groups

Humour in this next transition served to designate an employee's group status within an organisation, then functioned to reinforce the solidarity of that group, while concurrently segregating those employees who were not part of the 'tribe'.

Once an employee had gone through the initiation stage, it became apparent that organisations were not simply one collective group. Here, humour served to differentiate internal groups from one another: men from women (Clason, 2019), by nationality (Siegman, 2020) and workers from management (Lynch, 2009). As Lynch (2009) commented: “Workplace humour continuously brings people together, as well as creates barriers between groups” (p. 453). In this context, humour simultaneously enforced group solidarity (in-group) and excluded others (out-group) (Charman, 2013).

Humour has been described as a social agent to form a bond between workers (Ojha & Holmes, 2010), that is, a tool of social cohesion (Eriksen, 2019). This group cohesiveness served human affiliative needs, building positive personal relationships (Moody, 2014). Humour further reinforced the sense of belonging of the in-group. A funeral company employee commented:

> They are my saviours […] I am nourished […] by their cabaret and I am very thankful for that. They don’t know it, but I laugh a lot here, […] I laugh because they make me laugh, […] there are moments that are priceless […] paradoxically working in this place made me appreciate the worth of a laugh. (Grandi et al., 2019, p. 4)

Humour was also used to segregate the out-group. This was represented by interdepartmental humour, to criticise another department (Mullany, 2004) or more simply to question the status of an absent in-group team member (Nelson, 2014). The past experiences of employees also defined group status and the boundaries of acceptable humour. In a study by Yedes (1996), employees in a homeless shelter who had experienced homelessness were able to access it as a humorous topic, whereas those who had not were in the out-group, and thus segregated from the use of such humour. In other studies, the absence of humour was also used for exclusion, where women were not party to the more bawdy humour used by some men (Clason, 2019). This may be partly attributed to the industrial culture in which the humour was generated, for example, the traditionally male-dominated construction industry (Watts, 2007).

Paradoxically, it appeared employees traversed from the out-group to the in-group, through meeting inclusion criteria. Women working in a factory environment – rather than being excluded – may have been accepted, in that male workers presumed that by dint of women's decision to work in a factory, they would accept sexual humour and they then became part of the in-group. A male factory worker remarked:

> If you're working in the shop, and you're a woman, you have a different attitude or a different outlook on life than a secretary sitting behind a desk and typing. You have more—you're more—I think you're more open-minded into what's actually going on in the world, you know. Maybe a little more hard-core. You know you can laugh it off and shrug it off. (Clason, 2019, p. 213)

While the deductive reasoning of the male factory worker may well have been misguided, humour also assisted in traversing groups by bridging language barriers and cultural divides, which led to accessing the in-group (for those previously in the out-group) (Moody, 2014; Nelson, 2014; Siegman, 2020).

2.3.3 Exerting your Influence – Humour as Power

Employees used humour to affirm socially their individual and group identity. This theme highlighted how humour can be a tool to negotiate better terms, to challenge authority, ascend the ranks into management positions, and take control.

Initially, Chefneux (2015) found that employees used humour to air discontent about working conditions. This served to soften the impact of confrontation and also reduced the possibility of refusing their demands. In another study, this strategy was utilised in wage negotiations where humour was used to issue demands in a less threatening manner (Teng-Calleja et al., 2015). This discourse strategy disguised the demands and was understood as "a device to sugar the pill" (Holmes, 2000, p. 172).

Employees wanting to advance within an organisation then used humour as a strategy to challenge existing authority. In a study by Watts (2007), younger employees were observed mocking older employees' computer literacy. Holmes (2000) would describe this example as "contestive discourse" utilised by subordinates and directed at senior members of staff. Humour can be used as an informal critique of superiors to destabilise the existing power-differential. As Watts (2007) suggests "humour is one way to 'do power' less explicitly" (p. 176).

Holmes (2000) found that when employees traversed into a management role, it was then that humour became a tool to exert that newfound superiority. Managers deployed several tactics couched in humour to achieve the required goals. This included playful insults directed at high performers, which indirectly highlighted other staff members' underperformance and the need to improve. Furthermore, Lynch (2009) discovered managers also positioned themselves as 'one of the team' allowing involvement in group humour, yet subtly enforcing expectations and authority. As Jen, a junior chef in a restaurant kitchen, found:

> He [Chef] more plays with you and it's kind of saying that he's watching you, and he knows what's going on, and I'll see him with some of the guys, and he makes fun of them to say that "Yes, I'm the Chef, and I know what you're doing" (Lynch, 2009, p. 453).

In several studies, humour served to exert authority in other ways, for example, delegating work to subordinates in a way that avoided confrontation and encouraged staff to volunteer for the work (Mullany, 2004); challenging employees to do their fair share where the suspicion was that employees were 'coasting' (Lynch, 2009; Yedes, 1996); and generally to increase productivity (Holmes, 2000). As one manager described: "So I guess I, maybe that is another reason I use it [humour], to kind of move people along" (Martin, 2004, p. 160).

2.3.4 Using the safety valve – humour to relieve tension

As the temporal transition of employees continued, humour became a tool of mediation and relief in this final theme. Those in management positions and general employees used humour to negotiate the day-to-day challenges of organisational life, such as issuing orders, dealing with disagreements, boredom and coping with stressful situations.

In some studies, humour was used to ease tension when employees were dealing with a problematic topic or a contentious issue (Kangasharju & Nikko, 2009; Lynch, 2009; Martin, 2004). This served to relax group tensions and diffuse any disagreements. As Jan, leading a financial meeting at a zoo, confirmed: "OK, if there was a conflict, and if I thought it was one of those no-win situations, yes I would inject humor to try and separate the parties and divert it" (Martin, 2004, p. 160). Likewise, in another study, humour managed to break an impasse at the bargaining table during wage negotiations (Teng-Calleja et al., 2015) and, in doing so, management shifted the style of communication to reduce tension. That style was also applied in another study to issuing orders or directives, with humour lessening the threat to the autonomy of the employee (Holmes, 2000) and in a study by Chefneux (2015) humour resulted in softening the order to make it appear more acceptable.

Humour provided a safety valve for employees in the various cultures and industries encompassed by this review. In some cases, humour simply lightened the mood from the banality of work (Leith & Yerbury, 2017) and during demanding tasks

(Teng-Calleja et al., 2015). This was ably summarised by Richards (2010) who argued humour "escapes the straitjacket of business talk" (p. 159).

However, the need for relief was particularly evident in work that was traumatic, involving higher levels of emotional labour. The exposure to such trauma was evident in emergency service roles and among prison wardens (Charman, 2013; Eriksen, 2019; Tracy et al., 2006), those dealing with homelessness (Yedes, 1996) and funeral employees (Grandi et al., 2019). Tracy et al. (2006) argued these employees "used humor to highlight the way their work was incongruous, chaotic, and threatening" (p. 293). Humour offered temporary relief from such work and reaffirmed a collective sense that employees were not alone. This was summed up by a funeral industry employee who needed to relieve the tension of being around the recently deceased and grieving relatives all day, "we need to unplug for a while. Just among us, of course" (Grandi et al., 2019, p. 8). The use of humour as an adaptive coping mechanism for such work also demonstrated the temporal nature of this theme, as trauma eroded the psychological wellbeing of employees, humour provided a safety valve to normalise those events.

2.4 Discussion

The aim of this systematic literature review was to provide a thematic synthesis of studies that explored the use of employee-related humour in workplace communication. This developed an account that was relevant across countries, cultures, and industries. The thematic synthesis constructed temporal themes that described how humour supported an employees' organisational transition. Four analytical themes were created from the included literature.

2.4.1 Findings and Existing Theory

The synthesis began with the *initiation into organisational humour* theme, which explored how humour was used prior to and in the early stages of employment with a new organisation. The findings are consistent with previous theoretical accounts on new member initiation (Sherif, 2015) and, specifically, the theory of organisational assimilation (Jablin, 2001), in that initiation humour partly functions as a gatekeeping tool to ensure humoristic alignment between the newcomer and existing staff. New employees then have to interpret that humour agenda to ensure their own humour is in keeping with that of the existing staff. Cooper-Thomas and Anderson (2006) also refer to this as organisational socialisation, in which newcomers' individual differences affect both the desire and approach to 'fit in'. Faux pas caused by language barriers or inappropriate topics provided an opportunity for the newcomer to learn both accepted organisational humour and the specifics of a job role (Yedes, 1996). Newcomers used self-deprecating humour to communicate mistakes and lessen the impact of failure (Heiss & Carmack, 2012). However, Heiss and Carmack also found existing staff used humour in these circumstances to reduce the threat of corrective messages and provide newcomers with occupational knowledge. This provided a basis for ongoing socialisation and organisational acceptance for the newcomer.

The findings for this theme also suggest that newcomers, while absorbing the accepted humour to which they were exposed, adapted their own humour style to achieve peer acceptance. This aligns with the theoretical path model of peer acceptance developed by Sletta et al. (1995), who would argue this is a demonstration of social competence (developed at a pre-school age), which is then used adaptively by those newcomers in their new 'playground'. Ojha and Holmes (2010) found newcomers and existing staff used humour to cement their organisational acceptance as part of the family.

The following theme, *joining a 'tribe' – in-groups and out-groups*, demonstrates that the organisational 'family' is built of disparate groups, centred around two conflicting purposes of humour, that of group cohesiveness and segregation. In many instances across the included studies, humour simultaneously served both of those purposes (Charman, 2013; Lynch, 2009; Mullany, 2004). These findings align with the social identity theory of Tajfel and Turner (1979), which states that the in-group (us) exaggerates its similarities and differences with the out-group (them); and leader-member exchange theory (Graen & Uhl-Bien, 1995), as organisational leaders have a key role in defining and maintaining in-group and out-group status through the use of humour.

It was noted that humour used to reaffirm in-group status in these studies was often affiliative (intended to amuse others and foster relationships). This aligns with the earlier work of Martin (2003) on defining different humour styles. While affiliative humour might be used to bond the in-group, aggressive or derogatory humour was, at times, used to ridicule and exclude the out-group (Eriksen, 2019). However, they were often spared the direct exposure to this aggressive humour, as in-group members would redraw the lines of acceptable dialogue in their presence (Clason, 2019).

One final aspect of this theme was the possibility to traverse from the out-group to the in-group and vice versa. This included nationalities stereotypically at odds, being accepted (Siegman, 2020), to some women adapting and taking on a more masculine humour style to access a male in-group (Eriksen, 2019), thus being accepted and therefore party to in-group male humour (Clason, 2019). These latter two studies are perhaps also indicative of how women feel the need to adopt the same humour style to fit in with the dominant, male culture (Nielsen, 2017).

While the previous two themes utilised humour to forge a sense of organisational and group belonging, the *exerting influence – humour as power* theme encapsulated a temporal advance in which humour helped further a person's standing at work. Therefore, this is related to one of the three traditionally dominant humour theories, *superiority* (Gruner, 1997). Yet, proponents of *superiority theory* would argue that all humour is used, in some way, to gain advantage and therefore power. This review, other literature (Lintott, 2016) and theories (Shurcliff, 1968) would counter that assertion and see the use of humour to exert power as merely one of the many purposes that it serves. Nevertheless, in this review, the use of superiority in humour was widespread across the included studies.

Humour was used to negotiate potentially divisive workplace communication such as expressing discontent with working conditions (Chefneux, 2015) and negotiating wage increases (Teng-Calleja et al., 2015), not simply to exert one's own superiority (Morreall, 1997). Here, it operated as a vehicle to deliver contentious dialogue in a less threatening manner and simultaneously reduce the potential for refusal. This supports the findings of Meyer (2000) who argued that humour can serve several rhetorical functions, rather than a singular theory.

However, humour was used as a more overt means of exerting influence – to challenge the authority of superiors (Siegman, 2020; Watts, 2007). Kassing and Kava (2013) recognise its use as upward dissent expression, providing a non-confrontational means to air both discontent and further upward influence. Conversely, according to Lynch (2009) and Martin (2004), once superiors were again in a position of power, it was used to enforce their expectations of subordinates and gain compliance. These findings align with a previous theoretical account by Punyanunt (2000), highlighting the success of humour as a compliance-gaining strategy, a strategy in this review that crossed divides of both gender (Mullany, 2004) and culture (Yedes, 1996).

In the final theme *using the safety valve – humour to relieve tension*, those involved in the studies in this review often resorted to humour for multiple purposes: to soften criticism, lighten the mood and cope with stressful work. Benne and Sheats

(1948) describe a manager taking on the 'harmonizer' role, in which humour acted as the tension-releaser. This once more supports the findings of Meyer (2000) that humour does not simply serve a singular purpose but several functions simultaneously.

The use of humour to relieve tension was not restricted to those in power, but by those frustrated by management intrusion into working practices (Lynch, 2009) or cultural oppression (Siegman, 2020) to make the situation more bearable. These findings align with *relief theory* (Shurcliff, 1968), in which humour is used to vent growing tensions and elicit a sense of relief. That sense of relief was also experienced by employees in this review, using humour to lighten the mood. However, when the nature of that work became more psychologically demanding – such as for emergency service staff, prison wardens and funeral employees – humour became a safe haven to protect employees from the potentially traumatic nature of their work. Humour in these circumstances took on a coping function, where employees used it to normalise unpleasant situations (Grandi et al., 2019). The use of dark humour – that would appear callous or inappropriate to outsiders – served as a coping mechanism for those involved. As Rowe and Regehr (2010) suggest, this cynical and dark humour appeared to help those involved cope with the challenging circumstances of their work. Yet in a study of UK ambulance workers Mercer et al. (2024) suggest that chronic use of dark humour in the long-term may have negative effects on mental health. Additionally, Hochschild (2012) would also identify that these employees require a high degree of emotional labour to undertake their work. In this review, humour was a means to regulate that emotional labour and act as a safety valve.

2.4.2 Implications for Theory, Future Research and Practice

The findings of previous qualitative reviews have highlighted the theoretical implications of work-based humour at an industry level (Mathies et al., 2016; Pinna et al., 2018), for example, discovering humoristic alignment between management and frontline employees and the use of relief-based humour. However, the theoretical contribution of this review lies in the meta-perspective view of how employee-related humour crosses organisational divides, an aspect which had not been adequately discussed in existing qualitative reviews. While the detail within the themes can be seen in the component studies, the strength of this review has been to outline a narrative staging through which humour serves different functions. The findings of this review have suggested a temporal or chronological understanding of how humour is used in workplace communication. Future work on theory could focus on this temporal aspect of humour and explore further how it evolves, potentially leading to the development of a temporal humour theory that explains the different functions humour serves over an employee's organisational tenure, while also addressing a gap in the literature (Sandberg & Alvesson, 2011).

The findings of this review described a temporal transition that employees experienced in organisations that was couched in humour. Therefore, in terms of future research, a qualitative longitudinal study that crosses industries and cultures could further enlighten the temporal nature of employee-related humour and provide a deeper level of understanding. Additionally, as this review drew studies from around the world, future research could also explore global cultures and uncover differences and similarities in how humour is used in the workplace. This would provide a greater understanding of how humour functions within a culturally diverse workforce. Conversely, it would also be valuable to study different occupations and work sectors. The meta-analysis of Mesmer-Magnus et al. (2012) recognised the exploration of humour used within teams or between co-workers as a fruitful direction for future research. This could involve exploring organisational sub-cultures such as health and safety.

The practical implications of this review suggest that organisations could benefit from understanding how humour underpins an employee's temporal transition at work, to help provide clarity on how to support those different stages of transition, while ensuring the humour used remains contextually appropriate. If organisations understand the rhetorical functions of humour at work and cascade this knowledge to employees, this could foster both improved communication (Smith & Khojasteh, 2014) and employee psychological wellbeing (Mesmer-Magnus et al., 2012).

2.4.3 Strengths and Limitations

This qualitative systematic review provided a meta-perspective of employee-related humour that was lacking in existing reviews. The thematic synthesis offered an understanding of the temporal nature of humour within organisations, which was supported by the rigorous approach laid out by Thomas and Harden (2008) and strengthened by the inclusion of peer-reviewed studies that were subsequently appraised for quality. Furthermore, the included studies were drawn from a variety of disciplines resulting in different epistemologies, designs, and approaches – although more than half of the studies were ethnographic in approach. The methodological diversity of this body of research could be seen as a weakness, yet it is also part of the review's strength. In addition, the studies were drawn from several countries and industries, providing a comprehensive understanding of otherwise heterogeneous research (Lucas et al., 2007).

There are some limitations to acknowledge in this review. The results and themes reflect the process of analysis, which may have differed had more than one reviewer been involved with the thematic synthesis. As previously mentioned, due to the constraints of being a lone researcher, studies not in the English language were excluded due to the lack of translation capabilities. Nevertheless, that potential weakness was offset by the inclusion of studies published in English from Belgium, Finland, Hong Kong, Israel, Italy, Japan, the Philippines and Romania. It is also acknowledged that by not excluding papers on a quality basis this may be viewed as diluting the overall quality of the review. However, journal word limits may have partly accounted for lower scores and, furthermore, the inclusion of all papers added to the richness and texture of the overall review and would be weaker for their exclusion.

2.5 Conclusions

This literature review constructed a temporal staging to understand how humour was used in employee-related workplace communication, while also providing justification for the research element of this thesis, which will go beyond general employee-related workplace communication and focus specifically on how humour is used in health and safety communication at work. Humour is far more than a simplistic means of having fun and lightening the mood. It was shown to be a complex communication tool that crossed both industry and national borders. It is perhaps misunderstood and dismissed as the dialogue of fools and court jesters. The lasting Victorian notion that humour is frivolous and, in many cases, inappropriate may in part explain our contemporary framing of it in this way. This review, along with other literature on the topic, challenges this notion and exposes humour as an integral part of work-based dialogue and an important tool in navigating the dynamic workplace.

Chapter 3 - Methodology

3.1 Overview

The preceding literature review chapter described a temporal staging to explain how humour was used in workplace communication. Humour appeared to be a flexible tool within workplace dialogue when encountering such issues as initiation into a new organisation, dealing with conflict, and the exertion of power. The thematic synthesis furthered our understanding of how humour functioned in employee-to-employee workplace communication. It should be noted that this systematic literature review represented the knowledge base at the time. That knowledge base and feedback from the peer review process then informed the empirical study, particularly the data analysis phase. The review was published when relevant and has been internationally cited (Taylor et al., 2022). However, newer studies are included in both the introduction and discussion chapters.

The understanding gained from the review process provided a basis to explore different types of workplace communication, specifically in this study, that of health and safety communication. The present study contributes to this gap in the literature, specifically by exploring perceptions regarding the use of humour and its effects, between health and safety practitioners and fellow employees. This chapter contains the philosophical and methodological underpinnings of the research. The research aims, questions, and philosophical approach will be discussed initially to understand the relationship with the methods and approaches that have been used to address the research questions.

3.2 Study aims and objectives

Aim

To understand the perceptions of both health and safety practitioners and employees regarding the use of humour in health and safety communication.

Research questions

- What are the perceptions of health and safety practitioners and employees on the use of humour in health and safety communication?
- What do health and safety practitioners and employees consider are the effects of using humour in health and safety communication?

3.3 Philosophical approach

To provide a basis for the research methodology that follows and to answer the research questions, the philosophical position of this research is discussed. A critical realist perspective was adopted to underpin this research project. Positivism suggests reality is fixed and the knowledge produced is objective and value-free (Bunniss & Kelly, 2010). Constructionism, in contrast, holds that reality is socially constructed by and between the persons who experience it (Darlaston-Jones, 2007). Critical realism is a philosophical approach developed in the 1970s by social theorists including Roy Bhaskar (Bhaskar, 2016). It provides an account of its ontological and epistemological positions that provide a comprehensive framework to explain events within social science research (Fletcher, 2017). This challenges the notion that critical realism simply occupies the middle ground on the philosophical continuum between positivist and constructionist perspectives (Taylor, 2018). Critical realism posits a realist ontological position in that it is accepted that there is a real-world independent of the human mind, however, that reality can only be partially accessed by humans in glimpses or fragments of that reality (Levers, 2013). Critical realism stratifies reality into three domains: empirical, actual and real (Haigh et al., 2019). The application of Bhaskar's ontological levels to the social reality of this study would be thus: at the empirical level events are experienced and/or observed by us. For example, a communicator uses humour (event) and, as a result, the receiver may experience a humour response such as laughter (event), which can subsequently be observed by the communicator. At the actual level, these events that occur, whether observed or not, regulate the empirical level of reality (Walsh & Evans, 2014), for example, a communicator may alter the humour style used to align with the social norms of the audience present (Grandi et al., 2019). This alteration reflects the regulation process between actual and empirical reality. Finally, the real domain provides the generative mechanisms that act as causal forces for events (Fletcher, 2017), for example, humour can serve to relieve tension (Shurcliff, 1968) or exert power (Gruner, 1997), which acts as a causal force at the actual and empirical levels.

The knowledge produced by that social reality is epistemically relativist, which suggests that our knowledge of social reality is transient (being historically, culturally, and socially situated) (Al-Amoudi & Willmott, 2011). For example, whether humour is deemed appropriate – would be transient – as perceptions may shift with the passage of time and be delineated by cultural and social boundaries (Meyer, 2000). In the context of the present research, this epistemic framework recognises that the perceptions of participants on the use of humour in health and safety communication could be characteristic of their historical, cultural, and social situation at the point of data collection. The resulting knowledge of that reality is therefore fallible and subject to change (Haigh et al., 2019). Subsequently, if this study were repeated, the perceptions of participants may diverge from those originally conveyed. However, the human knowledge captured in this study did represent a small part of a deeper and vaster reality (Fletcher, 2017). Therefore, the knowledge created by this research provided a glimpse of a complex and multi-layered reality at a specific time and context.

It is argued that critical realism provides a suitable framework to understand social science research (Julnes, 2015; Maxwell, 2012) emphasising the social structures and agency that influence change (Gorski, 2013). The social structures involved in this study, such as organisational humour norms are affected by individual agents, for example, workers and those agents then influence and transform those social structures, that in turn influence agents once more. Furthermore, critical realism's stratified reality and epistemic relativism complemented the reflexive approach to data analysis in this study. The approach recognises the role of the researcher in knowledge production and that results represent an intersection of participant perspectives and the researcher's interpretation of those perspectives (Braun & Clarke, 2019). Further details of how this philosophical position affected the analysis process can be found in Section 3.5.6.

3.4 Research design

The research design of this study has been shaped by its exploratory nature, considering the research aims, questions, and philosophical positions (the choice of research methodology, therefore, required careful consideration to ensure the approach was congruent with the study). Initially, a quantitative approach was considered. Quantitative research typically involves the collection and analysis of numerical data to test a hypothesis, find associative patterns or causal relationships and assess the validity of results (Rolfe, 2013). It can facilitate the uncovering of people's experiences in a numeric form, yet requires a larger sample size to ensure the validity and reliability of such findings (Delıce, 2010). However, a recognised limitation of quantitative research is the reduced ability of participants to explain the meaning behind the answers provided (Rahman, 2016). Given the present research sought a deeper understanding of the phenomenon of interest, rich experiential data were required and subsequently, a qualitative study using a smaller participant group was compatible with the approach (Malterud et al., 2015).

Further reflection took place on the possibility of using a mixed methods approach, particularly given the referencing of critical realism as its philosophical underpinning, and the congruity of mixed methods with critical realism (Walsh & Evans, 2014). Mixed methods research combines quantitative and qualitative methods to answer multi-faceted questions that both expand and strengthen a study's conclusions (Schoonenboom & Johnson, 2017). However, bridging varied research conceptualisations can be difficult (Tashakkori, 2009) due to the complexity of merging different data sets, the time required, and the need for both qualitative and quantitative research expertise (Tariq & Woodman, 2013). A mixed methods approach can benefit from the collaborative effort of a team of researchers to overcome those difficulties (Burke Johnson & Onwuegbuzie, 2004). However, as a single researcher with limited quantitative and qualitative research experience, a stand-alone qualitative study was appropriate.

Consequently, a qualitative design was selected over a quantitative or mixed methods approach. Qualitative research can be defined as "the study of the nature of phenomena, including their quality, different manifestations, the context in which they appear or the perspectives from which they can be perceived" (Busetto et al., 2020, p. 1). The purpose of this research was to understand multi-perspectival views of the phenomena. Hühn et al. (2009) define a multi-perspective approach as one that presents more than one perspective to an audience. The use of multi-perspectival views both illuminates phenomena and enhances the credibility of findings (Harrison et al., 2016), depending on one's research questions and ontological perspective. This study sought a multi-perspectival view by engaging with both the communicator (health and safety practitioner) and the receiver (worker), and in keeping with previous multi-perspectival research (Devereux-Fitzgerald et al., 2021; Eze et al., 2019; Voss et al., 2020), it adopted thematic analysis as the chosen analytical tool (see Section 3.5.7).

In this study, the knowledge produced was derived from an inductive qualitative approach supported by a semantic and RTA of the data, detailed in Section 3.5.6. The approach produced themes and patterns strongly linked to the data (Braun & Clarke, 2006), and the semantic element used the literal or surface meaning of participant responses to code data (Braun & Clarke, 2019), while also allowing the researcher to interpret the patterns of meaning within the data to generate themes (Byrne, 2021). Critical realist ontology also influenced theme generation and structure during the analysis process, which is explained in Section 3.5.6. In addition, the American Psychological Association's Qualitative Research Reporting Standards (JARS-Qual), as described by Levitt et al. (2018), is used to assess and report on primary qualitative research and was followed in the present study to assist in demonstrating research quality. The method for putting this research design into effect is now articulated.

3.5 Method

3.5.1 Participants

To be included in the study, all participants were English speaking due to the limited time and funding available for translation and interpretation of this research. All health and safety practitioners had been in an active health and safety role for more than three months, to ensure they had had time to establish communication with co-workers. All employees needed to be involved in regular communication with the health and safety practitioners. They worked within a variety of organisation types, including oil and gas, rail, higher education, charity, sports events, construction, chemical and insurance. Deciding on sample size in qualitative research is debated, with no straightforward answer to deciding on an appropriate number of participants (Vasileiou et al., 2018). During the development of this research project, preferred sample sizes were set for the two categories of participants: 15 health and safety practitioners and 15 workers. Guest et al. (2006) and Ando et al. (2014) suggested that when using thematic analysis 12 interviews were sufficient to achieve data saturation. This occurs when all raw data can be categorised under existing themes rather than generating new ones (Constantinou et al., 2017). Initially, preferred sample sizes in this study were determined by utilising this approach. However, the subsequent adoption of RTA meant data saturation was no longer congruent with this study (Braun & Clarke, 2021b), detailed in section 3.5.6.

The participants in this study consisted of 13 adult male and female health and safety practitioners (two of which were known by the researcher) recruited from the North of England, and, five adult female workers recruited from health and safety practitioners' organisations, with whom the practitioners communicated on a regular basis (a pre-requisite in the research pack given to participants). The gender ratio of the health and safety practitioners was three quarters (77%) male (10) and one quarter (23%) female (3). The sample reflected the contemporary occupational context, as IOSH reported in 2020 that 79% of health and safety practitioners were male and 21% female (IOSH, 2020).

Challenges in recruiting the worker group included the ongoing coronavirus pandemic which resulted in organisations prioritising business operations and managing staffing levels (Hamouche, 2021). Pragmatically, the lack of connection between the researcher and organisational gatekeepers, for example, human resource managers, also led to difficulty gaining consent to approach workers.

Background and demographic information were gathered from each participant prior to the beginning of each interview. Table 2 describes the participants. This included sex, age, and tenure in health and safety for practitioners or, in the case of workers, their current role. The researcher allocated pseudonyms to protect participants' identities and which reflected the cultural background of the participants (all participants were White British).

Table 2

Background characteristics of participants

Interview	Participant	Sex	Age	Tenure in Health and Safety
Health and Safety Practitioners				
1	Matt	Male	52	12 years
2	Rachel	Female	30	9 years
3	Julie	Female	50	4 years
4	Ken	Male	59	16 years
5	Mike	Male	50	26 years
6	Sandra	Female	48	5 years
7	Paul	Male	42	16 years
8	Tom	Male	35	8 years
9	Joe	Male	62	20 years
10	Jeff	Male	53	20 years
11	Harry	Male	33	4 years
12	James	Male	65	30 years
13	Colin	Male	71	26 years

Interview	Participant	Sex	Age	Tenure in role
Workers				
1	Suzanne	Female	44	1.5 years
2	Christine	Female	48	15 years
3	Holly	Female	26	1.5 years
4	Carla	Female	47	1 year
5	Fran	Female	47	1 year

3.5.2 Recruitment

A two-stage recruitment strategy was decided upon to attract participants.

1. Health and safety practitioners were to be recruited from the IOSH Tyne and Wear group.
2. Health and safety practitioners were then asked to help in recruiting workers from their respective organisations by approaching gatekeepers to gain organisational approval and allow the dissemination of research packs.

In the initial phase, a presentation about the study was made in January 2020 at an IOSH Tyne and Wear group meeting, with 80 attendees (two of whom were known to the researcher), for participant recruitment via purposive sampling. Purposive sampling includes the identification and selection of information-rich cases for the phenomenon of interest (Palinkas et al., 2015). Group meetings are held in all regions of the UK and the rest of the world; therefore, this meeting provided a suitable means to access a group of potential participants with experiences of the phenomenon being studied (Braun & Clarke, 2013). The researcher attended this meeting as both a presenter and a chartered member of the IOSH Tyne and Wear group.

Research packs, as approved in the ethics application, were made available at the meeting. These consisted of flyers (see Figure C1 in Appendix C), participant information sheets (see Appendix D), expression of interest forms (see Appendix E) and consent forms (see Appendix F). In addition, potential participants were informed that they would be entered into a prize draw for a £50 Amazon voucher, should they choose to participate in the study. Eleven packs were collected by members at the end of the meeting, expression of interest forms were received at this point in hand-written format from three members. Research packs were also distributed to all IOSH Tyne and Wear group members via the group's email (managed by the IOSH communications officer) which totalled 1100 members at the time; twelve expression of interest forms were then returned to the researcher via email. Nine participants fitted the inclusion criteria, three did not meet them due to not being in an active health and safety role at the time. In addition, paper copies of the research packs were made available at the following IOSH Tyne and Wear group meeting in February 2020. A further element of practitioner recruitment was the provision of a link on the LinkedIn platform to my research documentation on the IOSH website, to attract further participants in May 2020. The information provided detailed inclusion criteria to maintain consistency within the sample. This resulted in one additional participant. Lastly, a final recruitment drive was conducted within a university based in the North of England after ethical approval was granted in February 2021. The rationale for this amendment was to recruit further participants for the worker group. Previously, recruitment had been directed through the health and safety practitioner group's organisations. In the case of the university, an email was sent to the gatekeeper, who then approached heads of departments to disseminate research packs on my behalf. One was also sent to health and safety practitioners in the university through the respective heads of departments to maintain the communicator/receiver balance in the participant group. Subsequently, one additional practitioner was recruited.

In the second stage of recruitment, a snowball sampling method was utilised. This involves using existing participants to assist in recruiting further participants, particularly in hard-to-recruit participant groups (Berndt, 2020). Nine health and safety practitioners from the first phase of recruitment indicated a willingness to assist with the recruitment of workers from their respective organisations. Organisational approval letters were sent to the nine practitioners to approach gatekeepers within the organisations. This involved workers who had regular contact with health and safety practitioners in the previous 12 months through informal and formal conversations, training, meetings, toolbox talks and similar communication activities. One organisation, which granted consent in June 2020, then disseminated the research pack via email to workers who fitted the inclusion criteria. Expression of interest forms were received from five workers.

Concurrently, engagement with this singular organisation proved the exception, as previously disclosed challenges curtailed the recruitment of this second (worker) group. However, six attempts between May 2020 and August 2021 were made to contact participants from the health and safety practitioner group to seek organisational approval and, despite an initial willingness to assist, no further recruitment was obtained. The coronavirus pandemic, in particular, affected the recruitment process for this study, creating difficulties in recruiting for this second participant group (workers). Health and safety practitioners from the first group prioritised organisational responses to the pandemic. Consequently, gaining the practitioners' assistance to approach organisational gatekeepers for approval to contact workers was problematic. Although repeated attempts were made, the researcher (with the support of academic supervisors) decided to halt recruitment in October 2021.

3.5.3 Data collection

Semi-structured interviews were chosen to capture the individual perceptions of participants. Such interviews typically have an interview guide with pre-prepared questions; however, flexibility is provided for the interviewer in the questions being asked, to allow spontaneous exploration of participant answers (Galletta, 2013). Semi-structured interviews in this context provided an appropriate framework to explore the relatively uncharted territory of the phenomenon of interest while also gathering the independent thoughts of participants (Adams, 2015). Additionally, semi-structured interviews are compatible with thematic analysis as their flexible nature supports the collection of rich qualitative data. Consequently, semi-structured interviews are commonly used in thematic analysis (Jowsey et al., 2021)

Alternative data collection methods were considered, particularly focus groups. However, concerns centred around group dynamics that may have suppressed unpalatable opinions or recollections of humour and, consequently, a greater chance of responses being subject to group bias (Ochieng et al., 2018). Group bias could be described as a reluctance on behalf of participants to discuss feelings and opinions that do not align with the social norms of the group (Chung & Rimal, 2016). Furthermore, participants were from different organisations, which would have made the organising of focus groups practically difficult too. Focus groups were not chosen for these reasons.

Semi-structured interviews are at the centre of a continuum ranging from structured to unstructured interview formats (Parker, 2005). Structured interviews are similar to questionnaires, as they lead to a delineated process where the same questions are asked in the same order to all participants (Brinkmann, 2014). However, the rigidity of this format restricted the dialogical potential for knowledge production and the ability to answer the exploratory nature of this study's research questions. Conversely, unstructured interviews, at the opposing end of the interview continuum, typically include a few open-ended questions, asked informally, where participants are encouraged to talk at length (Mann, 2016). The complexity of the analysis process involved in unstructured interviews makes it difficult to compare data in comparison to other interview methods; theme generation is, therefore, challenging as a result (Bihu, 2020). The multi-perspectival data produced in this study already had a greater degree of complexity, further adding to this and could not be brought together into shared meanings or themes. Unstructured interviews were, therefore, not compatible with the type of analysis conducted.

Interview guides were developed for both health and safety practitioners and workers, directed by the research questions and informed by existing literature. During this time questions were trialled with occupational peers to refine both wording and structure (see Appendix G). An advantage of adopting this multi-perspective approach to data collection (communicator and receiver) was the provision of more than one data source to examine the phenomenon. This method provided the basis for a deeper understanding of the phenomenon and aimed to enhance the credibility of the findings (Harrison et al., 2016). During data collection, to maintain consistency, all questions from the interview guide were asked to each participant. However, frequently the order in which questions were posed changed due to participant responses and often answers were provided spontaneously without the need to ask the specific question.

To ensure transparency, participants were fully briefed on the purpose and conduct of the research through the aforementioned research pack prior to interviews. Participants were then asked to read and sign the written consent form before the interview. Throughout this process, they were reminded of the voluntary nature of their participation, the confidentiality of the data and the right to withdraw from the interview process.

All interviews were recorded using an encrypted voice recorder and then transferred to encrypted cloud-based storage provided by Lancaster University, at which point the original recording was deleted. Additionally, participants were also sent a debrief sheet (see Appendix H) at the end of each interview to comment on the interview process and remind them of how the data collected would be used.

At the outset of recruitment in January 2020, it was envisaged that almost all interviews would be conducted face-to-face. The first interview in February 2020 was, as planned, face-to-face. This initial interview offered a pilot of the interview questions and provided a valuable lesson for future interviews. A prolonged informal conversation between the researcher and the participant prior to the interview covered topics pertinent to the study. On reflection this compressed responses to questions during the interview. Therefore, in conversations prior to all ensuing interviews, efforts were made to avoid more detailed discussions on issues pertaining to the research questions. In addition, a spontaneous question was posed to the first participant based on how the findings of this study might be shared with the health and safety community. This offered the opportunity to add the question to the interview guide.

However, when the coronavirus pandemic restrictions came into place in March 2020, these altered the data collection plan. All subsequent interviews were carried out remotely using video conferencing software, for example, Zoom and Microsoft Teams, and captured on the encrypted voice recorder. The shift to online data collection provided benefits such as reduced time disruption and associated costs for attending the interview for both the researcher and participant. Technical issues were minimal, and visual cues such as facial expressions were still visible, although restricted to the upper body (Thunberg & Arnell, 2021). This technological flexibility allowed the continuation of this research project and reflected the wider adoption of video conferencing as a solution to challenges presented by the pandemic (Rahman et al., 2021).

All but one of these online interviews were over the spring and summer of 2020. The period of data collection coincided with UK lockdown restrictions for both the researcher and participants. These circumstances provided a unique environment in which the researcher and participants had more time to reflect and answer questions, despite the effects of a global pandemic, as many UK citizens were working from home. This confluence of circumstances was the antecedent to capturing rich participant data, as found by Reñosa et al. (2021) in a contemporary study.

Interviews were conducted with health and safety practitioners (12) first, followed by five workers. One final interview was then completed with a health and safety practitioner. This resulted in 18 interviews in total. The data collection described resulted in 7 hours and 45 minutes of data, with 120 pages of transcription. Interviews lasted 15 to 37 minutes, with an average of $M = 25$ minutes. Those with the health and safety practitioner group lasted longer on average than the worker group, perhaps reflecting the insider status of the researcher in the former group (Merriam et al., 2001). Although the average time of the interviews was somewhat less than the 30 minutes to 1 hour advised by Dicicco-Bloom and Crabtree (2006), the level of engagement was both immediate and rich, perhaps reflecting the specific nature of the research topic being studied. The ability of semi-structured interviews to provide rich and detailed data sets quickly was also encountered by Fallon (2008).

All interviews were transcribed verbatim with the assistance of NVivo (Version 12) transcription software. All recordings were then played back in full to correct transcription errors. A denaturalised approach to transcription was adopted, which attempts a verbatim depiction of speech without accounting for every involuntary vocalisation (Oliver et al., 2005). Denaturalised transcription supported the semantic approach to thematic analysis of data in this study (Nascimento & Steinbruch, 2019). Conversely, naturalised transcription details speech as it was, with every informal expression included. This technique is often used in conversation analysis, where researchers look to go beyond what is said (Davidson, 2009). The transcription was carried out by the researcher. This allowed time for a deep engagement with the data and a better understanding of the experiences of each participant, to co-create knowledge (Williams & Whiteman, 2021). Although the study focuses on the use of verbal humour, instances of laughter were noted in each transcript to understand the contextual relevance of the response, an approach adopted by other humour studies (Charman, 2013; Martin, 2004).

3.5.4 Rigour

To ensure that qualitative research is conducted with rigour, criteria have been developed aimed at ensuring the 'trustworthiness' of the research and findings (Lincoln and Guba, 1985). Lincoln and Guba (1985) suggest that credibility, transferability, dependability and confirmability are essential to the quality of qualitative research. Quantitative research, in contrast, uses reliability, validity and generalisability to demonstrate the rigour of the measures used and the quality of research (Mayer, 2018). Although these criteria are paralleled in qualitative research, trustworthiness has been argued to provide a more appropriate framework (Mayer, 2018).

Credibility concerns the plausibility of research findings and places a significant emphasis on having multiple accounts of a phenomenon (Guba & Lincoln, 1989). In the present study, having both the perceptions of health and safety practitioners and the receivers of their communication provided perspectives from both sides of the conversation. This multi-perspective approach enhanced the credibility of this study's findings (Harrison et al., 2016).

In contrast, transferability concerns the extent to which the research findings can be applied to other contexts (Lincoln & Guba, 1985). Transferability is facilitated in this study through the rich, experiential data provided by participants during semi-structured interviews. Such thick description provided the data necessary for future researchers to make judgments about the possible transferability of findings to other contexts (Lincoln & Guba, 1985).

The dependability of qualitative research is defined by studies that are clearly documented, traceable and logical (Tobin & Begley, 2004). Concurrently, the extensive records maintained on all chapters of this thesis detail their evolution. For example, interview transcripts, coding and theme development all provided evidence to support the dependability of this study's findings.

The last of Lincoln and Guba's criteria for trustworthiness requires the confirmability of qualitative research; confirmability establishes how both the researchers' interpretations and findings are clearly derived from data (Tobin & Begley, 2004). Correspondingly, the inductive nature of the current study meant that the themes generated were strongly linked to data (Braun & Clarke, 2006), while the use of RTA, including the reflexivity of the researcher, acknowledged how the interpretations of such data were generated (Braun & Clarke, 2019).

It is worth noting that other models for quality in qualitative research have emerged, including the eight 'big-tent' criteria developed by Tracy (2010), which builds on the work of Lincoln and Guba (1985). Tracy observes quality through a pedagogical lens yet provides a framework suitable for assessing qualitative research across various paradigms. Tracy's (2010) criteria include: (a) worthy topic, (b) rich rigour, (c) sincerity, (d) credibility, (e) resonance, (f) significant contribution, (g) ethics, and (h) meaningful coherence. Therefore, to further demonstrate rigour using Tracy's 2010 'big-tent' criteria, notable additions to the demonstration of quality concerning the current study are discussed.

The present study covered a worthy topic - humour in health and safety communication - including its potential for improving the health and safety of people at work. Additionally, the exploratory nature of this study was both timely and relevant (Tracy, 2010), as it represented a new area of research, while the topic was significant with strong moral overtones (Schwandt, 1996) and being policy relevant. The reflexive approach of the researcher in this study (see Section 3.5.5) demonstrates both honesty and transparency, which Tracy (2010) suggests marks the sincerity of research. In contrast, resonance is achieved if a study can meaningfully reverberate with the intended audience (Tracy, 2010). The researcher anticipates that fellow health and safety practitioners will understand both the meaningful narrative from participants and the significance of this study, while the transferability of findings were be aided by the thick description obtained during data collection. Those findings (see Chapter Four) and conclusions (see Section 5.8) also highlight the significant contribution to knowledge that this exploratory study has made, contributing new knowledge to assist our understanding of humour in health and safety communication.

The ethical considerations for the present study are contained in the next section (see Section 3.5.6), which transparently met Tracy's (2010) four-fold framework for ethics. Procedural ethics – dictated by the governing institution (Tracy, 2010), in this case by the Faculty of Health and Medicine Research Ethics Committee (FHMREC) at Lancaster University - are clearly demonstrated (see Appendix I, J, K and L). Situational ethics refer to a context's specific circumstances (Tracy, 2010). The researcher's self-awareness of the health and safety context of the present study, including the discussion of workplace injuries and fatalities, meant the concept of 'do no harm' was considered during data collection. Relational ethics relates to the values of mutual respect, dignity and connectedness between the researcher and participants (Tracy, 2010). In the current study, the researcher aimed to show compassion to participants throughout data collection during the coronavirus pandemic, mindful of the impact it had. Exiting ethics concerns the handling and presentation of data after data collection (Tracy, 2010). Tracy (2010) suggests researchers should provide an accurate portrayal of participant stories; accordingly, the inductive and semantic analysis of data in the current study meant the researcher strived to do so. The final of the 8 'big-tent' criteria, meaningful coherence, refers to studies that achieve their stated purpose, deliver on their objectives, use appropriate methods and theory and interconnect literature, research, methods and findings (Tracy, 2010). Meaningful coherence is demonstrated throughout this study by answering the research questions set, the use of coherent methods to do so, for example, the use of both thematic synthesis and RTA, and the production of a cohesive overall thesis.

3.5.5 Positionality

As a result of an awareness to convey the methodological integrity of this study, it was important to acknowledge the researcher's position relative to the study undertaken. This reflexive approach acknowledges the active role of the researcher in influencing all aspects of a study, from selecting a research topic to presenting and discussing findings. Furthermore, it suggests that a researcher 'steps back' to reflect and theorise on the effects throughout a study (Attia & Edge, 2017). Reflexivity also includes a willingness on behalf of the researcher to acknowledge how one's background and experiences influence the research process, often termed positionality (D'silva et al., 2016). For example, "positionality refers to the stance or positioning of the researcher in relation to the social and political context of the study—the community, the organisation or the participant group" (Rowe, 2014, p. 628). This reflexive process could be described simply as a tool to aid transparency so that readers can take account of the researcher's active role in decision making throughout the study (Mackieson et al., 2018). Yet Braun and Clarke (2019) argue that adopting a reflexive position, being aware of oneself and the subsequent effects on the research process, is not only beneficial but intrinsic to qualitative research.

Correspondingly, in describing the lens through which I see the world, I have utilised the social identity map developed by Jacobson and Mustafa (2019). I am a lower-middle-class, self-employed, white, politically neutral, heterosexual male in my mid-40s. I grew up in a working-class ex-mining village in the North-East of England.

My upbringing (and lacklustre secondary education) has in part spurred my academic verve to pursue this PhD. This self-confessed social identity also positions me within a societal hierarchy, which inevitably affects how I interpret the world, and no doubt contributed to the adoption of this research topic. Furthermore, social identity affects all stages of the research process from the design adopted, methods used, interaction with participants and findings of this study (Jacobson & Mustafa, 2019). This self-knowledge allowed an interpretation of data that reflected the social dynamics of its production and analysis.

Additionally, being a health and safety practitioner for over 20 years meant that I adopted the position of an insider during this research project. In this context, an insider can be described as a researcher who is a member of the participant community; conversely, an outsider would be a researcher recognised as a non-member of that community (Merriam et al., 2001). It is acknowledged that in subsequent interviews with fellow health and safety practitioners, we shared common experiences and a sense of solidarity as peers, leading to transparent discussions about recollections of humour. This was compounded by the collective inquisitiveness of the participants as to the research's purpose and aims. The level of engagement was no doubt also affected by my own penchant for using humour throughout my career, without fully understanding why before this research. This intellectual curiosity, in part, provided the motivation to discover the usefulness of humour in my chosen profession. Therefore, open questions were posed in the interview schedule to allow both positive and negative responses concerning humour. This depth of engagement afforded by the insider status facilitated richly textured data regarding the phenomenon among health and safety practitioners. However, interpretations that privileged the use of humour were guarded against during data analysis as they might have coincided with my own views.

However, while experiencing insider status during data collection provided a platform for participant engagement, it was important to remain self-aware. As Hellawell (2006) suggested, much can be gained from being close to one's research, yet simultaneously keeping one's distance and adopting an outsider perspective allows reflection on the role of the researcher. Reflexivity in this context led this researcher to take on both an insider and outsider status.

The collective bond present with fellow health and safety practitioners was not as evident when interviewing participants who were employees in the same organisation as the health and safety practitioners. In this context, the researcher had outsider status during interviews with the worker group (Merriam et al., 2001), in contrast to insider status with the health and safety practitioner group. However, the comparative outsider status of the researcher during interviews with this group allowed self-reflection on the differing power dynamics of the researcher-participant relationship (Hellawell, 2006). Subsequently, with the worker group, levels of engagement increased, demonstrating the fluidity of insider/outsider status as recognised by Narayan (1993). Perhaps this was, in part, due to the positive perception they had of their own health and safety manager, which, consequently, may have influenced responses to questions. Nevertheless, pre-existing knowledge of the profession and the context of the research meant meaningful questions could be posed. This provided a platform in which participants were immediately engaged in the subject matter, recalling past experiences and sharing perceptions.

3.5.6 Ethics

This research project was granted ethical approval on 13th November 2019 (FHMREC19020) with subsequent ethical amendments (see Appendix I, J and K) by the Faculty of Health and Medicine Research Ethics Committee (FHMREC) at Lancaster University. As mentioned above, the coronavirus pandemic limited opportunities for face-to-face recruitment. Therefore, an ethical amendment in May 2020 was granted to use the LinkedIn social media platform to attract further participants for the study. Similarly, a further ethical amendment was granted in February 2021 to allow the recruitment of participants from a university in the North of England. Then, a final amendment was granted to halt recruitment of the second participant group (workers) in January 2022 (see Appendix L) and move from an earlier iteration of thematic analysis (Braun & Clarke, 2006) to the RTA approach (Braun & Clarke, 2019).

The research undertaken in this study aimed to produce new knowledge through questions designed to explore the research topic. However, key ethical principles considering harm to participants, informed consent, invasion of privacy and deception were duly addressed in line with the ethical approach of Diener & Crandall (1978).

The issue of anonymity and confidentiality of the participants arose during data collection. As interview questions asked about previous experiences of workplace humour, participants sought assurances that recollections of humour considered inappropriate would be anonymised. Therefore, to protect the identity of participants in recalling stereotypical sexist (Watts, 2007), homophobic (Faulkner, 2009) or otherwise 'darker humour' (Plester, 2013) participant pseudonyms were assigned.

The recollection of both darker forms of humour and previous participant experience of workplace accidents also introduced the potential for distress (Christopher, 2015). The researcher sought to manage the risk of distress by monitoring emotional reactions during interviews and offering to take a break or end the interview if necessary. Debriefing conversations at the end of each interview led participants to the sources of support in the debrief sheet, which were sent to each participant post-interview.

The coronavirus pandemic introduced additional ethical challenges to those already mentioned. Initially, the researcher was mindful of the psychological effect of the pandemic increasing stress and anxiety of participants through being locked down in their homes, restrictions on social contact and home-schooling of children (Razai et al., 2020). Online interviews were, therefore, organised around participants' commitments to ease disruption. A brief informal conversation was also initiated by the researcher at the beginning and end of the interview, to help with the effects of loneliness and isolation, potentially experienced by both the researcher and participants (Singh & Singh, 2020).

While ethical concerns were possible in this study, evidence during the interview process and subsequent debrief conversations, demonstrated that participants had generally valued the experience of reviewing previous humorous encounters and not found it distressing. Participants communicated that assisting a fellow practitioner and the opportunity to be associated with a research study had motivated them to participate, as previously found by Castillo et al. (2012).

3.5.7 Data analysis

A range of analytical methods were considered to interpret the data in this study. Initially, narrative analysis was appraised for its applicability as both structured and unstructured frameworks can be used to tell the story of the data, comprising of the lived experiences of participants which provide an individual context to a wider social narrative (Wong & Breheny, 2018). This method could have produced an interesting story of how participants in this study had come to use humour, particularly given the temporal staging of the literature review findings. However, as this study sought to explore a multi-perspectival account of how participants perceived the use and effects of humour in an organisational setting, thematic analysis provided a consistent and shared meaning of the phenomena that answered the research questions posed

(Devereux-Fitzgerald et al., 2021). Fundamentally, the aims of this study sought to understand participant perspectives of using humour and did not include investigating how participants came to use humour. Had that been the case, narrative analysis would have been a suitable analytical tool.

After considering the aims, research questions and the collection of qualitative data, two content-based qualitative analysis methods emerged as congruent analysis techniques for this study. Interpretative phenomenological analysis (IPA) as described by Smith et al. (2009) and the aforementioned thematic analysis approach of Braun and Clarke (2006, 2014, 2019). Both offer a congruent, structured and rigorous technique to analyse data that may provide a credible, contextualised understanding of a particular phenomenon (Braun, 2013). The former, IPA, is considered a complete research methodology in and of itself, rather than solely an analysis technique (Smith et al., 2009). It has an idiographic focus whereby the researcher aims to understand how participants make sense of their experience in relation to the phenomenon of interest (Pringle et al., 2011). This deeper individualised analysis can create a dualistic tension when searching for patterns across cases, which has been argued as potentially obscuring individual differences and limiting theme generation (Wagstaff et al., 2014). Furthermore, to uncover those patterns of meaning, a notably heterogeneous group was recruited, arguably lacking the homogeneity that would hold relevance and personal significance for participants in an IPA study (Noon, 2018).

Thematic analysis has been described as an approach that provides a degree of theoretical and analytical flexibility (Braun & Clarke, 2006). Flexibility in this context allows thematic analysis to be applied to a broad range of qualitative research approaches (Javadi & Zarea, 2016). However, Braun and Clarke (2019) have argued that flexibility only applies to thematic analysis as a generic method. Specific iterations of the technique are somewhat constrained by the paradigmatic and epistemological assumptions of the study's approach to knowledge production. In this study, the critical realistic framework allowed an experiential research approach and inductive analysis process (Braun & Clarke, 2021a).

Generally, thematic analysis is considered a method that identifies and analyses data and generates themes that describe the data in rich detail (Braun & Clarke, 2006). This approach was congruent with the research questions posed by this study. However, during the process of conducting this research project, Braun and Clarke (2021a) provided clarification on the delineation of thematic analysis approaches. In RTA the role of the researcher in knowledge production is specifically recognised – although the themes produced are grounded in the data as with other iterations of thematic analysis – theme generation envelops the thoughtful and reflexive engagement of the researcher (Byrne, 2021). The epistemological assumptions of this research project recognise the role of the researcher in knowledge production and are in agreement with Braun and Clarke (2019) that reflexivity is intrinsic to qualitative research. Pragmatically, RTA also provides a credible approach for a lone researcher, as there is no expectation in RTA that the codes and themes would be reproduced by anyone else (Braun & Clarke, 2019).

Therefore, the codes and themes developed in this study represented a confluence of the participants' own perceptions within the data but also the interpretations of the researcher in understanding the patterns of meaning across that data (see Appendix M).

These changes to the type of thematic analysis utilised in this study also affected decisions on determining the point at which there was sufficient data for the study. As previously mentioned (see 3.5.1), initially, the concept of data saturation was adopted, which has broad acceptance within qualitative research (Saunders et al., 2018). Data saturation occurs when all raw data can be categorised under existing themes rather than generating new ones (Constantinou et al., 2017). However, doubts exist that concern a perceived lack of understanding, subsequent application, and methodological coherence in its use (Braun & Clarke, 2021b; Malterud et al., 2015; Saunders et al., 2018).

Sample sizes were based on the findings of Guest et al. (2006) and Ando et al. (2014) who suggested that 12 interviews were enough to reach data saturation in qualitative interviews and thematic analysis respectively. Yet, as the move from thematic analysis to RTA was made, it became apparent that data saturation was not consistent with the RTA approach (Braun & Clarke, 2021b). Furthermore, in line with Sim et al. (2018), the inductive and exploratory nature of this study would make the application of data saturation inherently problematic, and the sample size should simply be determined by the one which met the study's aims. Therefore, the concept of information power was assessed as a potential guide for an appropriate sample size. "Information power indicates that the more information the sample holds, relevant to the actual study, the lower amount of participants is needed" (Malterud et al., 2015, p. 1753). Information power and the respective sample size are guided by the specificity of the study aims, participant group and richness of dialogue (Sim et al., 2018). An element of subjectivity is required for the researcher to determine the quality of dialogue and its subsequent 'information power' (Sebele-Mpofu, 2020). As this study had a narrow research aim, a compatible participant group and rich, time-intensive dialogue, information power was compatible with this study (Varpio et al., 2017). Concurrently, the 18 interviews included in this study, as already emphasised, provided data that was sufficiently rich and complex to answer the research questions.

The six-phase RTA process developed by Braun and Clarke (2021a) was followed to analyse the data in this study. The process entailed: 1) data familiarisation and writing familiarisation notes; 2) systematic data coding; 3) generating initial themes from coded and collated data; 4) developing and reviewing themes; 5) refining, defining, and naming themes; and 6) writing the report. The six phases assisted the researcher in attending to the important aspects of thematic analysis (Byrne, 2021). To assist the process a reflective diary was kept during the analysis process.

RTA was applied to code the transcribed interview data in chronological order, which provided a meaningful and systematic start-point (Maguire & Delahunt, 2017); however, the iterative process meant each transcript was read and re-read, developing codes within the text and then generating and refining themes. The iterative analysis process produced potential themes across groups which were refined into final themes. Critical realism's layered ontology influenced theme generation. Empirical and actual layers of reality were explored during data collection, for example, the use of humour and the adaptation of humour styles. However, the 'real' underpinning reality which detailed the causative agents behind those upper layers of reality was generated by the researcher and participants. Using NVivo (Version 12), a macro level management and analysis of the phenomenon (Walsh & Evans, 2014) was conducted.

Chapter 4 Findings

4.1 Overview

The preceding methodology chapter described the process by which data in this study were collected and analysed. This chapter presents an account of the themes generated from interviews with health and safety practitioners and the receivers of their communication. The themes describe the experiences of participants regarding the perceptions and effects of the use of humour in health and safety communication. Data were analysed using RTA, as described in the methodology. As previously described, the themes generated were: (1) *The humorous robot – using humour to 'humanise' the formulaic nature of the role,* (2) *Awkward bedfellows? – humour's challenging relationship with health and safety*, (3) *Reading the room – the situational predictors of humour* and, (4) *More than a laugh – the enduring effects of humour*. These are presented in line with the epistemological and ontological assumptions of critical realism (see Section 3.3). This results section – with its associated themes – presents the empirical (i.e. the use of humour) and actual (i.e. altering humour style to suit an audience) layers of reality in critical realism. However, the closing section that outlines the underlying causal mechanisms that represent the real layer of reality (i.e. the effects of humour) within each theme is in the discussion section of this thesis (see Section 5.4).

4.2 Main Findings

The four main themes above, generated from the data, were the result of a combined analysis of the perceptions of both health and safety practitioners and the receivers of their communication regarding the use of humour. These themes describe the perceptions of and interactions between health and safety practitioners and the employees with whom they communicated. To distinguish between practitioner quotes and those of receivers, each type is highlighted with a (P) or (R), respectively. Where necessary the researcher has added clarifying information in square brackets. The themes are summarised below in Table 3.

Table 3

Theme descriptions

Theme	Definition
The humorous robot – using humour to 'humanise' the formulaic nature of the role	Describes how humour was used by health and safety practitioners to assist with the delivery of the somewhat dry and formulaic (i.e., robotic) content of health and safety communication
Awkward bedfellows – humour's challenging relationship with health and safety	Describes how participants debated the reasoning for using humour in health and safety communication, suggesting possible reasons for both humour's inclusion and exclusion
Reading the room – the situational predictors of humour	Describes three situational elements (audience, subject matter and location) that practitioners considered before humour was used in health and safety communication
More than a laugh – the enduring effects of humour	Describes participant reflections on the long–term effects of using humour in health and safety communication

4.2.1 The humorous robot – using humour to 'humanise' the formulaic nature of the role

The initial theme – the humorous robot – explores the apparently contradictory concepts within the theme title and describes how humour was used by health and safety practitioners to assist with the delivery of the somewhat dry and formulaic (i.e., robotic) content of health and safety communication. Humour provided a communicative bridge to engage with employees, develop rapport and deliver key health and safety messages. The theme explores concepts around perceptions of authority, building relationships, the importance of displaying personality and humanity, and the facilitative role of light-heartedness.

Both sets of participants in this study were conscious that the health and safety practitioner role included the application of company rules and legislative compliance. This resulted in shared perceptions by many of the participants that the health and safety role could be seen as authoritarian. In this context, participants described an authoritarian practitioner as one who would be "spouting the law" – James (P) and "barking orders at people" – Sandra (P). Both practitioners and receivers found that humour provided a means to remove some of that authority to aid communication: "So, if I'm a little bit more human, and a little bit less rigid and sort of legislative or authoritative, then it relaxes them" – Rachel (P). Holly (R) also voiced a similar view: "But if you're not too extreme or scary you can get more out of people." Additionally, receivers suggested that further communicative barriers could develop if 'scary' or authoritarian approaches led to condescension. Carla (R) suggested humour provided a bridge across such barriers: "It's just engaging people, that's where it really is. It's not treating them like idiots, they're not idiots." In this context, where perceived barriers existed, practitioners suggested that humour served to remove some of those authoritarian perceptions of the practitioner and assisted in opening communicative pathways:

> I think it [humour] puts us both on the same footing. And [does] not put me on a higher footing to look down at them going, you know, you're doing this wrong, and you know, blah, blah, blah and wagging my finger and that type of thing – Julia (P).

Practitioners actively sought to realign those authoritarian perceptions and suggested that humour assisted in the levelling out of authority and allowed an environment of equality to develop: “You're the bloke standing up there or you're the man in charge and you take that sort of rank away if you like and make everybody in the room the same including yourself” – Ken (P). Most practitioners indicated that humour assisted in creating a sense of homogeneity between the practitioner and the receivers.

Humour was also used to increase rapport and helped build trusting relationships between the practitioner and receiver. The receivers recognised how humour was utilised by the practitioner to this end. Carla (R) observed her practitioner using humour and identified the initial purpose: “So, it’s that relationship building and that trust, and building that rapport with them.” One practitioner described this important aspect of the health and safety role: “We have a laugh and I ask them about their families and that kind of thing… It’s about getting to know people” – Sandra (P). The relationship development conveyed by both practitioners and receivers revealed humour as a point of commonality between the two groups that then facilitated the sharing of personal aspects of each other’s lives. In doing so, practitioners and receivers acknowledged the role of humour in subsequent relationship development. Practitioners suggested that humour allowed communication to flow between the two groups while engendering a sense of collective purpose around the health and safety of people at work, a shared goal which furthered the practitioner-receiver relationship:

> You're approachable, you're like them. You know, you say, you’ll sit down and learn things. You're not Superman and if they can realise that and that you're not stern and you're not going to growl at them and just things like that lightens the mood and brings them on board and we get into it together – Ken (P).

Practitioners and receivers also identified the role of humour in making practitioners appear more human: “Because a lot of workers think the safety guys are like a robot” – Matt (P). Humour, therefore, was understood by practitioners as a way of displaying one’s personality and revealing individual characteristics, rather than just the official role they held. This is reflected by Harry (P), who recognised how humour assisted in him appearing less robotic: “I think the only reason I use humour is to break the ice a little bit and just, you know, again show them that I am, I’m not a robot.”

Harry and Matt’s assertion that the use of humour made them, as practitioners, less robotic also led receivers to recognise how openness was a way of displaying one’s humanity. Humour helped convey that openness to receivers and in doing so elevated the trustworthiness of the practitioner, as already mentioned by Carla (R). Without this humanising process, practitioners suggested the development of working relationships and related health and safety communication would be more difficult:

> What I tried to gain in any [health and safety] discussion, with any contractor or supplier, is a professional relationship, but one that shows me as an ordinary human being so, you know, your failings, your foibles, and other bits come into play quite easily – Mike (P).

While supporting Mike (P) in recognising the importance of displaying one’s humanity, Tom (P) argued that a bid to be authentic did not have to diminish the perceived importance of health and safety. Practitioners argued that the inclusion of humour and health and safety communication were not mutually exclusive and demonstrated that practitioners were just people – rather than automatons – trying to get through the working day.

> You know, it is a serious business [health and safety], but equally, it doesn’t stop the fact that you know, it’s people delivering it at the end of the day. You know

> work is dehumanising enough, I don't think we should stop, you know, having fun and, you know, being individuals as well – Tom (P).

The demonstration of the practitioner's individuality through humour did not go unnoticed. Receivers recognised the injection of humour being utilised to convey health and safety messages, suggesting that individualism, health and safety and humour could co-exist, "But it showed us all the health and safety team, they actually do have a sense of humour that you know they can do something like that just occasionally… and it comes across well" – Suzanne (R)

Finally, participants also recognised the facilitative role of light-heartedness when discussing how humour might be incorporated into health and safety communication. Holly (R) provided this advice for practitioners, "I think it's better to be a little more light-hearted, maybe not hilarious, but just a bit more light-hearted." The terms "lighten" and "light-hearted" were frequently used across interviews with both practitioners and receivers. Participants used the term to describe how humour functioned as a tool to inject vitality when transferring health and safety information:

> I think it lightens the mood of health and safety. Because health and safety is seen as a very drab subject, a 'hard sell'. I think it lightens the mood a little. You know when you can put a bit of humour in there – James (P).

Participants shared the perception that health and safety as a topic could be observed as dull or wearisome. In light of the difficulties in transferring such information, Fran (R) suggested that humour acted as a light-hearted counterpoint, "because it's made more human and not just a dry set of principles." Practitioners, therefore, interspersed such information with humour, to relieve the lack of inherent interest in the topic. Their use of humour resulted in an understanding from receivers that practitioners were utilising light-heartedness to provide a congenial means to transfer knowledge that might otherwise have been perceived as uninteresting:

> It's great and I think it's a good skill to have. You know, I respect them more, if that's what you're trying to get at. I respect them as a communicator, erm… I respect their ability to put humour in the right place and engage with an audience and make it more entertaining than it might be otherwise. – Suzanne (R).

In summary, practitioners shared views that the health and safety role had the potential to be authoritarian and perhaps robotic. Humour provided a means to reduce the perception of health and safety practitioners as authoritarian and made them appear less robotic. Humour also provided a point of commonality – as individual human beings – between practitioners and receivers, which allowed working relationships to develop. Those relationships were further developed as humour conveyed the human side of practitioners, allowing the expression of individuality. The humorous content of health and safety communication was also perceived by participants as a light-hearted means to offset the perception of health and safety material as being dry and impenetrable.

4.2.2 Awkward bedfellows – humour's challenging relationship with health and safety

Within this theme, participants debated the reasoning for using humour in health and safety communication, suggesting possible arguments for its inclusion and exclusion. The theme explores reflections on humour as a response to the changing role of the health and safety practitioner, the role of individual styles and preferred approaches to humour, its misinterpretation, the importance of balance and the positioning of humour in health and safety communication.

Practitioners reflected on the changing nature of the health and safety role and how the expectations for contemporary practitioners have evolved: “If you’re a practitioner in health and safety, the days have gone where you could just quote section 7 of the Health and Safety at Work Act” – James (P). Practitioners suggested that the traditional autocratic position of a health and safety practitioner which ensured the enforcement of health and safety rules was in stark contrast to the contemporary role that involves engagement with the workforce: “Yeah, probably historically that [humour] wasn’t considered to be an important trait, but I think it is increasingly more so now it's based on the levels of collaboration that we have to go through” – Tom (P). Colin (P) similarly reflects below on his 50 years as a health and safety practitioner; as the levels of engagement required by the current practitioner role have increased, the interpersonal requirements of those practitioners have evolved as a result:

> Because you know, there is only the odd person now, who’ll be actually flouting the laws, health and safety law. Those days they did an awful lot of it [flouting the laws …], 30 years ago? Probably, yes, it was more enforcement than actually now, engagement. That's the difference. First 30 years of enforcement, the last 20 years, more engagement. That's probably the best way of saying it. – Colin (P).

The enforcement element of the health and safety role already highlighted led practitioners to share perceptions regarding the officious nature of some health and safety peers: “But I'm just seeing too many health and safety advisors that come in like marching, like some kind of policeman and scream at everybody and have this air about them that puts people off” – Sandra (P). Some of the reflections of practitioners went further and identified a stylised image of how they thought other employees viewed health and safety practitioners: “People have the impression that all health and safety advisers wander around with hi-vis and a clipboard” – Ken (P). This linked the serious persona conveyed by Sandra with the additional bureaucratic element of a traditional practitioner's role. Receivers provided additional insight into the more officious approach to the role and suggested it may have negative effects: "So, it would be possible to be very jobsworth about it, very serious. But that would be disengaging for the people he [the health and safety practitioner] leads" – Suzanne (R). Practitioners were acutely aware of the potential for a traditional approach to health and safety communication to be perceived negatively by receivers. Harry (P) shared a practitioner's perspective of consciously trying to avoid this approach: "I got taught a lot of years ago to try and make safety personal. Try and, you know, not just be the kind of people that we're trying to steer away from."

Participants went further and suggested that an individual's personality might influence whether humour was utilised. Subsequently, practitioners who were perhaps not comfortable with using humour may not have included it in communication: "I think if somebody is not funny, I think it's hard to make them funny. Or if they… if they struggle with humour. I think it's hard for them to bring it into their training sessions." – Julia (P). Other participants also described the part of the reasoning behind a practitioner's reluctance to use humour, as perhaps a by-product of an individual's character. Jeff (P) suggested: "I think, unfortunately, a lot of health and safety practitioners are a bit dull." However, as a counterpoint to Jeff and Julia's observations, Sandra suggested that if one was already predisposed to using humour in general communication, then using it regarding serious health and safety information in a work setting was a natural progression: "Humour is just a part of my life, you know, it's just the way that I do things. And I'm no different at work" - Sandra (P). Participants shared perceptions of those personalities that may or may not be predisposed to humour and how that influenced the subsequent use of humour in health and safety communication.

The fear of humour being misinterpreted by receivers was a further reason shared by participants for its potential exclusion from health and safety communication.

Participants shared the inner conflict that some practitioners may have experienced in using humour: “I think it's got a limited role. And people use it slightly sparingly for obvious reasons. I think they’re overly concerned that it gets misinterpreted” – Rachel (P). Receivers who observed the practitioners’ communication suggested possible reasons for a reluctance to use humour, as it had the potential to dilute important health and safety information: “I suppose there is a concern that people might not think it's a serious subject and zone out and think, well, I don't need to pay attention to that. That could be a risk” – Fran (R). In support of Fran’s observation, practitioners also recognised the potential for humour to dominate communication to a point where health and safety information is lost within the humorous content: “I think it [humour] has a place, but I can imagine it if it becomes too jokey and humorous, you're gonna lose the message, aren't you?” – Jeff (P). Participants addressed these concerns about the overuse of humour and suggested a balance between the humorous element of communication and the delivery of key health and safety information:

> I think it [humour] is perceived well, as long as you're not belittling the message too much. You know, you can't do it all the time. You've got to have a mix of serious data/information being communicated and then the occasional humour element – James (P).

Participants also stressed that the humorous element should not take primacy over the health and safety elements of the communication. Sandra (P) recalls a recent observation she undertook of another health and safety practitioner during a training course: “I was observing somebody during training recently, and I felt like they were doing a bit too much joking and it made me feel uncomfortable, because I did not feel it was appropriate.” Therefore, the balancing act performed by health and safety practitioners to correctly intersperse humour within health and safety communication may not always be successful. However, receivers who observed practitioners during communication acknowledged the reasons for the use of humour and its rationing: “So, you have to sort of counterbalance that seriousness with enough, enough humour to keep it engaging for people” – Suzanne (R). Participants acknowledged that the challenge of engaging people and communicating serious health and safety information led to humour, albeit sparingly, becoming a tool to assist in the delivery of the information being transferred.

In relation to the balance of humour and the seriousness of the subject matter being discussed, Ken used military operations as a comparator to suggest that if such a high-risk environment did not preclude the use of humour, then why should health and safety communication be any different: “Yes, it is a serious subject [health and safety], [a] very serious subject. When you've got lives at stake. But flipping heck, you've got men going to war for the country, they laugh and joke when they’re on the front line” – Ken (P). Practitioners, therefore, conveyed the notion that levels of occupational risk did not necessarily correlate with decisions not to use humour in workplace communication.

Participants were also eager to describe the nature and positioning of humour in such circumstances when it was used to communicate health and safety information. The overriding concept put forward by practitioners and receivers was that the health and safety message itself should not be derided or undervalued. Participants suggested that humour essentially functioned as a peripheral communicative strategy to help deliver key health and safety information: “You don't make a joke of health and safety, but you introduce the humour to get the health and safety message across” – Colin (P). Receivers observed this phenomenon and shared reflections of humour being interspersed with, yet not targeting, health and safety information: “Taking the mickey out of health and safety isn’t directly done. Because we all know it’s serious” – Carla (R). One practitioner shared a final reflection that clearly articulated how health and safety communication and humour could co-exist: “I had a boss of a global consultancy that you know, said 'Health and safety is a serious business. But it doesn't mean you have to be serious" – Tom (P).

In summary, this theme described how the proliferation of the use of humour within health and safety communication was linked to the evolution of the health and safety role itself, which required greater levels of engagement with workers. Furthermore, its inclusion or exclusion in this context was explored further in relation to an individual's predisposition to using humour or reluctance to do so. However, participants demonstrated that the latter was also a result of practitioners' fear that humour could be misinterpreted and devalue the health and safety message. Therefore, participants suggested that practitioners should achieve a balance between humorous content and health and safety information to avoid such misinterpretation. Finally, most participants were clear that humour acted as a peripheral tool to help deliver health and safety information rather than health and safety being the specific target of humour. This prompted the notion that humour and health and safety did not have to be 'awkward bedfellows', in that humour had a meaningful function – when used appropriately – by those practitioners who were willing and able to utilise it.

4.2.3 Reading the room – the situational use of humour

This theme explores the considerations before using humour and discusses the situational elements involved in that decision-making process. The three situational elements (audience, subject matter, and location) were considered by practitioners before humour was used in health and safety communication. Firstly, this theme considered the complex factors that were used to determine the audience's suitability for using humour. Secondly, subject matters that were or were not compatible with humour were discussed and, the third element involved identifying the training room as a location conducive to humour. The theme explores concepts around the use of stereotypes and intuition to understand an audience, perceptions of subject-matter boundaries that exist to determine whether to use humour, the notion of involuntary training attendance and the components of training room humour.

Participants revealed initial expectations regarding the first situational element; the use of suitable humour based on the nature of the audience one might encounter. For example, Jeff (P) suggested that both the occupational group and seniority of the audience altered the style of communication: "If you are communicating with a load of labourers on a construction site, you're gonna have to probably do it very differently to construction site managers or company directors." All participants broadened the concept of the audience further and discussed the industrial setting in which workers were situated. All participants shared experiences of various industries and how, at least in part, perceptions of the industry and the respective audience set the tone for acceptable humour: "There was definitely not as much humour in the automotive industry in communications than there is in the more relaxed furniture industry" – Harry (P). Receivers also shared perceptions that audiences from some industries would be humour averse: "Well let's face it, it's insurance, it's not renowned for its humour qualities" – Christine (R).

As a result of these stereotypical views of different industries, participants suggested that humour styles were not necessarily transferrable. It appears this was due to several factors, including the workplace culture; for example, participants described the abattoir business as "masculine-orientated" – James (P) and the construction industry as notorious for being "politically incorrect" – Jeff (P). Participants also identified the role undertaken as influencing the transferability of humour to other audiences, "scaffolders, they're the kind of roustabouts of the events world with fairly earthy humour" – Mike (P) or "Architects being a bit more serious" – Tom (P). Subsequently, this led to an acceptance that occupation-related norms, including the culture and job role, predicated the level and type of humour that may be accepted prior to meeting the audience:

> I will work with paramedics; we work with doctors and nurses and first aiders. And we have fatalities at our events sometimes, this is part and parcel of what we do. They are completely used to that, that's what they have in their workplace every day, so it doesn't faze them. It's tough for somebody who sits in an office or would never, ever come across that [a fatality]. So, it's that thing of… They just don't… There's not the same sort of element or edge of black humour the medics have, in the way that they get serious stuff across – Mike (P).

The pre-judgement of occupational groups and their workplace settings prior to communication then led to practitioners also using intuition to determine how receptive the audience would be to humour: "I would have to test the water a little bit, you know, just gauge the mood of the room" – Harry (P). Practitioners shared recollections of understanding when it was appropriate to inject humour into communication: "I'm quite good at when is the right time to use humour and when it's not" – Sandra (P). Practitioners also stressed that due to the relatively unknown attitude of both individuals and groups toward the acceptance of humour prior to communication, practitioners were tasked with interpreting the response from the audience when using humour in health and safety communication: "You don't know until you get in there, what they're going to be like. So, it depends on how they react to your first story, as it were. And it's being light on your feet I think" – Joe (P). Practitioners proposed a combined process of considering both pre-judged stereotypical ideas regarding the audience, coupled with live feedback during communication, which prompted improvised humour from the practitioner.

In expanding the notion of the audience further, participants shared cultural stereotypes that affected the inclusion of humour in communication. Practitioners suggested regional identity as a precursor for the acceptance of humour: “I think Geordies are quite… we’re quite a funny breed anyway” – Julia (P). However, Matt, also from the North East, provided a different perspective: “Well now I’m working in the Middle East and humour is a non-starter because basically the cultural differences, people don’t expect you to say anything humorous” – Matt (P). Practitioners indicated that perhaps a tendency toward using humour was tempered according to region-specific norms or requirements.

Participants also suggested that changing preconceptions of how the age and gender of the audience might assist in determining what type of humour was appropriate: “I’m early to mid-50s. So, I was brought up in the 1970s when political correctness wasn’t really a thing. So, I’m very aware that my son’s generation are much more aware of things like that” – Jeff (P). Correspondingly, some participants also shared how the gender of the people being communicated with might change the nature of the humour being utilised: “It depends on the mix of genders as well. You can use a little bit more risqué humour, usually with blokes” – Joe (P). Participants acknowledged the existence of stereotypical preconceptions which added to the rich and complex determination of the audience.

Receivers recognised that analysing the complexities of an audience presented a challenge to practitioners in attempting to read the individuals and groups before using humour: “You know, it’s very difficult, but I think you have to figure out the kind of person you’re dealing with to decide how you approach things. I don’t think it’s one size fits all” – Carla (R). A small number of practitioners also relayed difficulties in using the knowledge of group stereotypes and then aligning humour accordingly: “Obviously, there’s so many ways you can offend people now, that’s the thing you’ve got be careful of as well" – Paul (P). One practitioner shared an experience of failing to read the room when he used homophobic humour over a decade ago to ground workers, recalling a statement made that used a training participant as a target for humour:

> The most important thing is to make sure you go home at the end of the day to your wives. I used to point to one guy and say, in your case your boyfriend. But all the guys used to laugh – Matt (P).

When Matt then applied that humour more recently and with a different audience, the 'humour' failed to have the desired effect. In this case, delegates attending a training course were discussing the use of an underground cable avoidance tool: "I mentioned not to swing it like a handbag like you're a bit gay. Somebody actually took offence to that. So, I actually had to write out an apology for that." Other participants recognised this as an example of an outdated humour practice which was unacceptable, "Obviously, there's things like protected characteristics which I would never joke about" – Harry (P). Most practitioners and receivers additionally recognised the temporal nature of humour and how the above example of so-called humour was too 'near the knuckle' for contemporary audiences, and to do so breached an evolving code of what is considered acceptable humour within health and safety communication.

Participants then discussed the second situational element – the subject matter. Prior to injecting humour, practitioners contemplated the topic being discussed and determined whether humour was appropriate. Specifically, subjects that were deemed inappropriate for humour were an area upon which practitioners and receivers agreed. When the subject involved human suffering, where people were seriously injured or killed, the use of humour was considered distasteful: "If you're doing something like you've followed up on a serious accident, you've really got to wind it back and take it [humour] out of there completely" – Joe (P). Participants recalled numerous disasters in which many people lost their lives such as fires at Bradford City Football Club[1] and Grenfell Tower[2], and agreed humour had no place in such discussions: "Piper Alpha[3], you know, lives lost. How do you make fun out of that?" – Suzanne (R). The interplay between practitioner and receiver suggests the existence of preconceived ground rules regarding the subject matter. Breaking those ground rules had the potential to represent a failure on behalf of the practitioner. Participants perceived that attempts at humour on those subjects could lead to an uncomfortable silence from receivers.

However, participants' views differed when referencing workers who were accustomed to dealing with death. As previously discussed, medical workers, as an occupational group, were observed using dark humour on this subject matter. It was suggested that because of the frequency of exposure to such events, the occurrence was normalised and, as such: "Medics and paramedics see the world differently to the way that we see it" – Mike (P). Therefore, participants acknowledged that use of humour in such circumstances was not uniformly denounced. Subsequently, the ability of practitioners to read the room came to the fore.

The third situational element of this theme – the location – unpacks the training environment as a physical manifestation of the 'room' in which humour was most commonly used by practitioners. Participants highlighted the training room as a suitable workplace environment to use humour, a place where employees gathered to receive health and safety training and communication from the outset of employment. However, practitioners did acknowledge that not all employees were motivated by the prospect of health and safety training, which elicited some grudging attendance and a

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[1] Bradford City football stadium based in the North of England suffered a major fire on the 11th of May 1985, during a football game, which killed 56 people.

[2] Grenfell tower was a 24-storey block of flats in West London, England. A major fire on the 14th of June 2017 killed 72 people.

[3] The Piper Alpha oil and gas platform was situated in the North Sea off the northeast coast of Scotland. It exploded on the 6th of July 1988 killing 167 people.

negative perception of what was about to happen, “They've either been required to come in [as it is] compulsory, or they've been ‘voluntold’ as I call it. So, they will come in with an attitude, ‘Oh, health and safety’s boring’” – James (P).

Set against such a potential backdrop of reluctant attendance, practitioners identified the training room as the location most likely to elicit and potentially require humour: “I think the biggest part of where I’ve seen humour best used, has been in the training environment” – Tom (P). A receiver also identified the training process and environment as more likely to result in humour from her health and safety practitioner: “It’s more when I’ve done training with him when I’ve done training on how to carry out assessments or I’ve had an audit, then we have a laugh and a joke” – Fran (R). Participants suggested that the level of humour in health and safety communication increased within the training environment in contrast to the actual place of work. The training room corralled both practitioners and receivers into a location cut off from the usual rigour of the professional working environment. Therefore, it appears from the accounts of participants that the training room provided a workplace environment that was more conducive to using humour in health and safety communication.

Participants also recalled the type of dialogue in which humour manifested itself within the training room. Specifically, the sharing of personal experiences:

> The stories that I tell are very relevant to me, very relevant and quite personal to me because they happened either to me or I was part of it. I think it's getting them used to making them feel that it’s ok to bring in humour – Julia (P).

The sharing of real experiences in the training room appeared to be appreciated by the recipients of the practitioner’s health and safety communication: “If it’s genuinely experiences, that makes them even funnier because they’re real life” – Carla (R). While real experiences elicited a mostly positive humour response among participants, some individual experiences linked to personal trauma meant humour would fail and potentially cause distress on an individual level. One participant shared an experience of losing a family member in an industrial accident. Practitioners, therefore, needed to be mindful of what real experiences were shared in the training room. Nevertheless, practitioners suggested that anecdotes were more meaningful when related to the trainees in the room: “Now you use humour, and you use personal anecdotes, and you try and adapt it to them. So, it’s a major thing” – Joe (P). Practitioners shared the ability to improvise in such circumstances and utilise the adaptive nature of humour in the training environment to involve trainees, yet minimise distress.

Participants elaborated further and suggested sharing stories of human failure and the ability to laugh at oneself were also used in the training environment: “With stories, I can tell them about how I was so accident-prone and that I’m just a walking hazard. If they ever see me walking around campus just give me a wide berth, I fall over a lot.” – Julia (P). The receivers of practitioners’ communication suggested real experiences involving self-deprecating humour performed a function with the training environment as they: “pique people’s interest because it’s a bit different and a bit quirky” – Christine (R).

Participants also noted that the humour involved in training sessions was not necessarily pre-determined and involved an element of reading the room: “So you need to get a feel for the room. Rather than just, you know, on slide 2 I’ve got this hilarious gag” – Mike (P). The notion of using impromptu humour in the training room was also highlighted by other practitioners. The non-scripted and intuitive nature of training room humour did not go unnoticed by receivers of the practitioners’ training sessions: “It’s not necessarily up there in the slides but in the presentation of it. They keep it funny” – Suzanne (R).

Participants also suggested the ability to use humour in the training environment – including the real experiences, self-deprecation and the impromptu nature of humour already shared – needed a degree of confidence in the subject matter. Mike (P) and Sandra (P) suggested that "knowing your topic" was a key element in allowing humour to be used. The depth of knowledge appeared to create a level of confidence for practitioners to use humour within the training environment. Receivers of a practitioner's communication referred to the use of humour in this context: "I'd be fine with it. But you want a degree of feeling confident that they know what they're talking about" – Fran (R). Participants implied that the use of humour was subject to a conceived level of knowledge to permit its use, suggesting a lack of competence may inhibit the use of humour.

In summary, there was a triad of situational considerations – audience, subject matter and location (the training room) – before the use of humour was deemed appropriate. Practitioners and receivers described the process of filtering preconceived stereotypes (not always successfully) regarding the audience before certain types of humour were deemed appropriate. Furthermore, the subject matter was considered in an attempt to use humour that was compatible with the topic being discussed. Finally, the training room was identified as a workplace location where humour appeared prevalent; and it assisted in the delivery of health and safety communication to potentially reluctant participants. Practitioners used real experiences and impromptu humour while contemplating the other situational elements in order to read the room.

4.2.4 More than a laugh – the enduring effects of humour

In this final theme, participants reflected on the long-term effects of using humour in health and safety communication. The theme explores concepts around the retention of knowledge, humour's role in disseminating information, encouraging compliance, future interaction between practitioners and receivers and interdependent thought.

Participants discussed the results of using humour in health and safety communication. The word "remember" appeared repeatedly in both practitioner and receiver accounts. Participants suggested that one of the outcomes of interspersing humour within health and safety communication was to increase the retention of the knowledge provided in that communication: "I think it definitely stays with them and using humour, yeah it just helps your retention – Rachel (P). Receivers also acknowledged the role of humour in retaining knowledge and suggested that practitioners were "using humour to draw their attention to something, so hopefully, that makes the message more memorable rather than just blurring into another slide of facts and figures" – Fran (R). Fran suggests that key elements of health and safety communication were potentially targeted by practitioners, and humour was deployed to assist receivers' recall of the information.

Practitioners also used significant events to intertwine health and safety information and humour. Key messages from turning off the "Christmas lights in the office" to "evacuating the building on hearing a fire alarm" were delivered by practitioners with a humorous element. Participants highlighted that the fusing of significant events with humour also assisted with the recall of health and safety information, which played out in a recent recollection of one receiver regarding Valentine's Day:

> They did one in February of this year. The risks of forgetting to buy your partner a bunch of flowers, or whatever, you know, there was some serious stuff in the background about using candles at home and things like that. It sticks in your mind because it had a more humorous tone to it – Suzanne (R).

Following Suzanne's recent recollection of health and safety information relating to Valentine's Day. Other participants discussed the possibility of that knowledge persisting for much longer. The term "longevity" was used by a few participants to describe the enduring retention of health and safety information. A practitioner (in the role of a receiver) shared recollections of his own health and safety training over five years ago: "I had a NEBOSH[4] trainer, you know, we did two weeks solid in the classroom. It was a laugh every couple of minutes, and I remembered every single thing and it was brilliantly done" – Tom (P). The enduring effects of the training course experienced by Tom were also reflected in other practitioner experiences in the role of communicator or trainer: "I try to look for alternative ways and whether it be humour or another method, it's to try and get that engagement in the first place and then get that longevity, longevity with it so people retain the information" – Rachel (P). Receivers concurred and suggested humour had the potential for them to "remember the content better and for longer" – Suzanne (R).

Practitioners indicated that in addition to humour assisting the retention of knowledge, the humorous element also led to the increased potential of workers disseminating health and safety information to others: "Well, if they laugh, they remember, if they have a good laugh in the lecture, you know, they remember it. And they'll pass… they'll talk about that later on" – Colin (P). Other practitioners discussed the use of humour as a tool to persuade receivers to embrace good health and safety practices, resulting in the cascading of health and safety information to other workers: "If you can sort of convince those ten people, how many people will they speak to? That, do you know what I mean? So, you're almost, you're spreading that message" – Paul (P).

[4] NEBOSH – The National Examination Board of Occupational Safety and Health provides accredited health and safety training courses in the UK and the rest of the world for health and safety practitioners

Practitioners perceived that humour, at least in part, had the potential to assist with the further dispersion of health and safety communication.

Participants in this study also acknowledged that humour had a role in assisting with an agenda to encourage receivers to conform to health and safety rules. Referring to health and safety communication that involved humour, practitioners shared tentative expectations that receivers would comply with health and safety requirements: "And hopefully at the end of it, the message is still there, and they've received it, and they act in a way that's been asked of them" – Harry (P). Receivers suggested that an approach that involved humour would be more likely to elicit a compliant response: "You have to be nice, approachable and funny, and easy to talk to, to be able to get something out of them" – Holly (R), that is, to get them to comply. Practitioners also perceived that humour provided a means to encourage repeated compliance with health and safety practices. A practitioner shared an example of health and safety communication during the coronavirus pandemic, which related to the wearing of face masks:

> Our facemask message, we used bad examples of people, you know, somebody with a plastic bag over their head with a hole cut in it, and things like that. So, we used those illustrations to get the message across – we need to wear a mask – James (P).

Practitioners also used humour to highlight non-compliance as a means to encourage enduring adherence to health and safety rules. Sandra used humour to alert a worker on a construction site who was walking on the road: "What the bloody hell are you doing over there man? Jesus, come over here and get on this fabulous walkway that's been made for you to stay safe, and they just laugh about it". Practitioners used the highlighting of non-compliance as a self-conscious attempt to change the behaviours of workers and instil an enduring pattern of repeated compliance:

> I've spoken to people one-to-one and I've kidded them on and it's a little bit of psychology, a little bit of amateur psychology. Where you say to somebody, look, I don't want you to do this, and I don't want you to do that – Matt (P).

The humorous approach adopted by some practitioners was perceived to have assisted with the development and enduring nature of practitioner and receiver interaction: "It [humour] relaxes the whole atmosphere and makes the job a lot easier, and it makes them more upfront if you like, more willing to give you information" – Ken (P). The notion that humour contributed to the levels of interaction between practitioner and receiver was identified by Fran (R) as the working relationship with her health and safety practitioner matured:

> I'm now comfortable checking things with him [after humorous conversations] and knowing that I can ask him for guidance if something's a little more complex. I tend to check in with him and check if I'm doing the right sort of things.

An increase in workers approaching health and safety practitioners to not only validate actions but also to share health and safety concerns was highlighted by most participants: "I've noticed that people do approach me a lot as well. If they've got a concern about something, they feel comfortable enough to come to me and speak to me directly about it" – Sandra (P). Participants indicated that humour assisted in both the continued interaction between the practitioner and receiver and also the sharing of health and safety information.

Practitioners also suggested that a potential enduring effect of using humour during communication was an increase in workers using their initiative: "And I'm finding that the people are coming to me and saying, 'Oh, you know, we spoke last time, can I just show you this that I've done? Look at this what I've got'" – Sandra (P). Sandra conveyed the enthusiasm demonstrated by those aforementioned workers, suggesting a willingness to improve health and safety conditions proactively without the need for prompting from health and safety practitioners.

In summary, this final theme demonstrated the enduring effects of humour in health and safety communication. The humorous element, at least in part, led to perceptions that humour acted as a 'cognitive hook' for workers to retain health and safety information longer than would have happened otherwise. Humour also appeared to increase the likelihood of workers dispersing health and safety information to peers after training. Furthermore, participants acknowledged that the use of humour also assisted in the continued compliance of workers with health and safety rules. Additionally, it was perceived to have increased interaction between practitioners and receivers, which in turn led to improved reporting of health and safety concerns and proactive behaviour from workers. The functions of humour in health and safety communication in this theme demonstrate a continued and multifaceted role that certainly goes beyond just having a laugh.

Chapter 5 Discussion

5.1 Overview

The themes presented in the previous chapter are now considered in relation to existing research and theory. The discussion is presented by research question (5.2) and (5.3), to understand how this study's findings in the context of the wider literature and related theories answer those questions. This chapter also describes potential causal mechanisms for the findings in the theoretical implications (see Section 5.4), which considers critical realism's 'real' layer of reality (Haigh et al., 2019, p. 160). The four themes were: 1. *The humorous robot – using humour to 'humanise' the formulaic nature of the role;* 2. *Awkward bedfellows – humour's challenging relationship with health and safety*; 3. *Reading the room – the situational predictors of humour;* 4. *More than a laugh – the enduring effects of humour*.

Lastly, the study's strengths and limitations (5.5), implications for policy and practice (5.6), future research ideas (5.7) and conclusions (5.8) are presented.

5.2 RQ1 - What are the perceptions of health and safety practitioners and employees on the use of humour in health and safety communication?

Overall, health and safety practitioners' and employees' perceptions of humour were diverse (yet demonstrated broad agreement with each other) and spread across the four themes to answer this research question. These themes and findings will be discussed in relation to previous empirical research and current theoretical positions. Five key perceived uses of humour came through in three themes: in theme one (*the humorous robot – using humour to 'humanise' the formulaic nature of the role*) the discussion concerns perceptions about humour and the authoritarian nature of the health and safety practitioner role; in theme two (*awkward bedfellows – humour's challenging relationship with health and safety*) the increasing use of humour as part of the changing role of the health and safety practitioner is explored and perceptions of how humour might be used within health and safety communication are also discussed; in theme three (*reading the room – the situational predictors of humour*) the various broad-brush categorisations of groups are discussed, which determine the style and use of humour used in health and safety communication and training.

5.2.1 The humorous robot – using humour to 'humanise' the formulaic nature of the role

In the current study, this theme suggested that health and safety practitioners may be seen as authoritarian and "robotic". The use of humour may challenge this view and help create more positive interactions between practitioners and recipients by making health and safety practitioners seem more "human" It does this by addressing power imbalances and identity perceptions.

The findings of the present study suggested that humour was perceived as a means for health and safety practitioners to mitigate some of the "jobsworth" stigma that was associated with the role. Indeed, the term "jobsworth" was used by some practitioners and receivers in the present study (see 4.2.2). Almond and Esbester (2016) also suggested that health and safety practitioners were viewed by the public at the time as "jobsworths, people who meddle and make life harder" (p. 91).

In addition and in contrast to the current research study, previous research has shown that humour has been used by employees as a mechanism to challenge perceived power imbalances by softening the impact of any potential areas of disagreement, for example, during wage negotiations (Teng-Calleja et al., 2015) by workers to facilitate a better deal, and by junior workers to make fun of senior workers' computer literacy (Watts, 2007). However, in the results of the present study, rather than challenging authority, health and safety practitioners perceived humour as a means of dissolving perceptions of themselves as authoritarian practitioners – practitioners who could be "spouting the law" – James (P) and "barking orders at people" – Sandra (P) without humorous content.

Previous research has shown that humour has been used by subordinates to expose perceptions of authoritarian power in organisational management structures and render it fragile. Huber's (2022) systematic review suggested that humour acts as a "sense-breaking" (p. 539) tool (i.e. a tool that helps explain, enrich and develop a conversation), making power-based dialogue more palatable. Huber produced a conceptual framework which explicitly detailed the relationship between organisational humour and power, specifically, that humour had the potential to transform power relations in the workplace. According to this framework, the finding – relating to organisational humour and power – could be seen as consistent with health and safety practitioners in the current research study using humour as a "sense-breaking" tool to transform receivers' perceptions of the health and safety practitioner role, while revealing new knowledge in this context. Therefore, the orthodox perception of health and safety practitioners as authoritarian or as "jobsworths" is rendered fragile, allowing humour to support favourable perceptions of the role.

The conceptual framework of Huber also draws on the work of Petriglieri and Petriglieri (2010), which tentatively suggests that organisational workers were utilising humour in power-based dialogue to engage in 'identity work' which uses humour "to create, maintain, and display personal and social identities that sustain a coherent and desirable self-concept" (Petriglieri & Petriglieri, 2010, p. 45). We now know, as a result of this study, that perceptions of health and safety practitioners suggest that humour was part of a desirable self-concept used to portray a positive aspect of their identity, with health and safety practitioners actively engaging in identity work (Petriglieri & Petriglieri, 2010).

The results of the present study also suggest why practitioners used humour to reduce perceptions of authority. Practitioners and receivers suggested that authoritarian approaches could be perceived as condescending, which fuelled negative perceptions of the health and safety practitioner. In previous research, Norrick and Spitz (2008) found that those in power may appear patronising in workplace discourse and humour mitigated these perceptions of condescension for employees. Although not directly line-managed by the practitioners, receivers in the current research study similarly perceived that humour was a tool for practitioners to avoid being perceived as patronising.

The findings of the present study also suggest that humour was used to level out any perceived power imbalance between practitioners and receivers during health and safety communication. Although not in a health and safety context, previous research findings (Holmes, 2000) reflect on this phenomenon where humour was used to deemphasise power imbalances between managers and subordinates in New Zealand government departments. Holmes adopted an ethnographic approach to capture authentic workplace interactions, allowing the ethnically diverse participants control over data collection – participants chose when tape recorders were activated. Holmes suggested that humour forms a "positive politeness strategy" (p. 167) that can reduce the threat of authoritarian acts such as reaffirming rules. In the present study, some practitioners perceived a power imbalance between themselves and the receivers during health and safety communication. Most practitioners perceived that humour helped promote a sense of equality between themselves and the receivers of their communication.

5.2.2 Awkward bedfellows? – Humour's challenging relationship with health and safety

In the current research study, this theme suggested practitioners and receivers perceived that as the role of the health and safety practitioner evolved to include more worker interaction, the use of humour between them increased. However, some practitioners appeared reluctant to use humour due to concerns about its place and timing in communicating some aspects of health and safety content, as discussed earlier in section 4.2.2.

To unpick the phenomenon regarding role evolution, it is helpful to contrast the role of both contemporary and later 20th-century health and safety practitioners. Practitioners in the present study perceived the health and safety practitioner's role some decades ago as being autocratic, with less worker communication and focused on enforcement. This is supported by research, for example, Woolford et al. (2017) summarised that organisations were often reactive in rectifying health and safety problems following workplace accidents or ill health, resulting in legal punishment of both organisations and individuals, for example, fines or imprisonment. Therefore, the health and safety practitioner's role was, to some extent, a product of organisational health and safety management at the time, i.e., compliance-driven (Hale et al., 2020) and, in part, this explains the perceptions of participants in the current research study that traditional health and safety practitioners were more likely to be bureaucratic, officious, and lacking in humour.

However, the results of the present study found some practitioners perceived their role had transitioned from traditionally authoritarian (ensuring compliance with legislation and workplace rules) to one of greater engagement with workers, in which the use of humour has increased. Previous research has highlighted some of the reasons for the evolution of the health and safety practitioner role. For example, Zwetsloot et al.

(2013) recognised the need for more innovative and proactive solutions to improve employees' physical and psychological safety at work. One particular focus over the last couple of decades has centred on human behaviour at work and its relationship with accidents and injuries. To some extent, this has increased the use of social mechanisms such as training, consultation and communication to influence employee behaviour (Wachter & Yorio, 2014). Wachter and Yorio's (2014) statistical analysis recognised the link between greater worker engagement and improved health and safety at work, measured over several years. The statistical analysis of Saleem et al. (2022) also supports the previous study, finding that the higher the level of worker engagement, the safer the behaviour among Malaysian construction workers. Therefore, these circumstances partly explain the current research study findings, which suggest that humour facilitated a communicative style based more on dialogue than instruction as the need for communication between practitioner and receiver increased. Furthermore, the statistical analysis of An et al. (2023) found that leaders' humour correlated with enhanced engagement with subordinates and reduced employee silence. Taken together the findings of the present study and previous research (An et al., 2023; Saleem et al., 2022; Wachter & Yorio, 2014) tentatively suggest that humour, worker engagement and safe work behaviours could be related.

To elaborate on the perception around the use of humour in the evolution of the health and safety practitioner role, Hale et al. (2020) has summarised the numerous key influences over the preceding 35 years that brought about changes to the occupation, including changes in legislation that encouraged more worker involvement, the health and safety function becoming part of mainstream business, and the professionalisation of the role, for example, its chartered status. However, the review did not explore the adaptations required by those in the role due to such changes. Those adaptations are important, as role theory (Biddle, 1986) suggests roles are continuously being constructed and reconstructed and individuals are then required to modify behaviour to conform to role expectations. For example, Morrison and Smith (2013), in exploring the evolution of the occupational therapist-client relationship, found that humour was consistently evident when the connection between an occupational therapist and client matured over time, requiring deeper emotional interaction. This is similar to the perceptions of participants in the present study regarding the changing nature of the practitioner-receiver relationship, tentatively suggesting that as the role evolved to include more communication with receivers, humour became a consistent part of the maturing communication with receivers.

However, the findings of the present study also indicated that the evolution of the health and safety role may have left some health and safety practitioners struggling with the increased amount of engagement with workers now required in their role and the subsequent expectation of humorous dialogue, as also indicated in the findings of Morrison and Smith (2013) above. A review by Cheraghi et al. (2023) summarised the broad reasons for resistance to change in nursing, suggesting individual, interpersonal and organisational reasons can explain a reluctance to change. Cheraghi et al.'s findings regarding role change in nursing – and the nurse-patient relationship – suggest that as the traditional authoritarian health and safety role changed (Hale et al., 2020), the increased need for interpersonal communication and humour may have created tension – an awkwardness – for some health and safety practitioners, and a resistance to change. Cheraghi et al. (2023) highlighted the complexity of reasons that could explain why nurses were resistant to the evolution of the role, which is reflective of some health and safety practitioners' reluctance to use humour. For instance, negativity toward the change could emanate from uncertainty about one's ability to adapt or doubts about the effectiveness of humour.

Some health and safety practitioners in the current study considered that personality may explain why some peers were reluctant to use humour. A previous review by Plessen et al. (2020) also concluded that personality affects an individual's humour style and the propensity to use it. For example, some personality types, such as extroverts, are more likely to use humour, whereas introverts might appreciate humour but may be reluctant to use it in the workplace (Plester & Lloyd, 2023). The findings of the current research study tentatively suggest that a practitioner's personality traits may have affected their ability to utilise humour and partly explain the perception of practitioners in this study that some health and safety practitioners found the use of humour awkward. Although the personality of health and safety practitioners has not been subjected to empirical study, previous research by de Jong et al. (2019) suggested that job roles which involve greater interaction with people were associated with extraversion and openness – traits associated with humour. Therefore, as the role of the health and safety practitioner has evolved, the optimal personality traits required to do the role most effectively may have also changed, traits which may not have been as beneficial in the previous authoritarian role. However, the potential importance of those traits, for example, openness and the use of humour, may have increased for the modern health and safety practitioner role.

A further perception regarded the positioning of humour in health and safety communication. Some practitioners and receivers perceived that the use of humour should improve the messaging of health and safety communication, but that the health and safety content itself should not be the subject of humour. Previous research has found that humour was well-matched as an implicit means to grab attention in health promotion, for example, in small talk (Moyer-Guse et al., 2011). However, the overuse of humour has been found to have a negative effect on messages. For example, undergraduate receivers of messages around safe sex – in the Moyer-Guse et al. (2011)

study – were reported to find the messages unimportant if they were overly doused in humour. Similarly, in the present study, participants recognised the importance of health and safety communication and perceived humour as a vehicle to deliver key health and safety messages; for example, one participant suggested the use of humour to begin a conversation about the importance of using pedestrian walkways on construction sites. These findings suggest that the serious nature of some health and safety communication, such as the prevention of workplace illness or injury, may be diluted if the health and safety message itself is the target of the joke. Keeping humour peripheral was preferable, for example, if a practitioner used self-deprecating humour about their inability to wire an electrical plug (so the joke was about them and not the subject) before the core communication on electrical safety.

In the current research study, both practitioners and receivers shared their views on the potential overuse of humour in health and safety communication. Some shared recollections of other practitioners' immoderate use of humour, which elicited feelings of inappropriateness and discomfort. These findings align with previous research on workplace communication by Plester (2009). In this ethnographic study, humour – sometimes "risqué" (p. 586) – was found to be omnipresent in four ethnically diverse New Zealand-based working environments. One of those working environments openly used sexist and racist 'humour', which would have been deemed inappropriate in the other working environments, and possibly illegal. Plester (2009) concluded that whether humour "crossed the line" (p. 597) was determined by organisational norms, suggesting that humour has the potential to be perceived as overused or inappropriate by those outside the organisation. This goes some way to explain some participants' views of other practitioners in the current research study, in that practitioners may have had different conceptions of what humour "crossed the line". However, most participants suggested that the use of humour requires limiting to avoid serious health and safety content being overridden.

The difficulty in balancing the amount of humour within health and safety communication was recognised by most participants in the present study. These findings highlighted the need to achieve a balance between the use of humour and the communication of serious health and safety content, so it would not reduce its perceived importance to the audience. Previous research has explored the subject of balancing humour in general workplace communication. The findings of Plester and Hutchison (2016) describe the four previously mentioned organisations in New Zealand that, to some extent, encouraged the use of humour. However, the authors found the fine balance of using humour to offset the monotony of work was set against the expectations of getting the job done. Similarly, in the health and safety context of the current research study, the use of humour was perceived as a welcome addition by participants. However, views differed across participants as to what constituted too much humour.

5.2.3 Reading the room – the situational use of humour

In the present study, this theme suggested that various broad-brush categorisations were used to determine the use and style of humour. However, the organisational training room was perceived as an ideal environment for the introduction of humour, an environment in which health and safety practitioners seem to have used a storied approach incorporating self-deprecating humour to convey health and safety messages.

All participants discussed how they used broad-brush categorisations of the receivers of their communication to either tailor their humour or decide not to use it. The term 'broad brush categorisations' is closely linked to the use of stereotypes, which can be defined as "generalised beliefs about groups of people, which are used to make decisions and judgements about them" (Stewart & Raihani, 2023, p. 1). Stewart and Raihani also suggested that stereotypes can be positive and characterise warmth toward a specific group or be used negatively as a basis for prejudice and discrimination. Therefore, to understand this phenomenon further, the numerous broad-brush categorisations (from the present study) that were considered before using humour in health and safety communication are discussed: the industry in which employees were based, their level of authority or seniority, gender, age and regional/cultural identity.

The perception that an employee's industry sector, for example, the automotive industry, influenced the style and propensity to use humour in health and safety communication was shared in the present study by all practitioners and receivers. These findings included the potential for humour to be masculine-orientated (e.g., in the abattoir industry), offensive (e.g., in the construction industry) or scarce (e.g., in the insurance and automotive industries). Industry-specific norms of humour are also evident in previous research, for example, the use of dark humour among emergency services and prison staff (Charman, 2013; Eriksen, 2019; Tracy et al., 2006), and the use of crude humour in manufacturing and construction industries (Clason, 2019; Watts, 2007). Therefore, previous research findings (Charman, 2013; Clason, 2019; Eriksen, 2019; Tracy et al., 2006; Watts, 2007) are congruent with participants' perceptions in the present study that stereotyped industry-based humour does have some empirical basis.

The present study also highlighted perceptions from some practitioners that the seniority of receivers of health and safety communication influenced the use of humour. If health and safety communication was delivered to senior managers and directors, it was perceived that humour styles would differ, or humour would be less likely than if the receivers of the communication were labourers. One interpretation of these findings relates to social identity theory which explains group phenomena based on social context

(Tajfel & Turner, 1979); in this context of in-groups and out-groups, practitioners may have perceived themselves as being part of the out-group (not a member of the board of directors) and subsequently less able to introduce humour as they were not part of that organisational sub-culture (Holmes & Marra, 2002). Similarly, when addressing a group of labourers, the practitioners again could have perceived themselves as part of the out-group. Additionally, Holmes and Marra (2002) found that higher-status meetings were also more serious, with less humour than typical organisational dialogue. However, the review of Mesmer-Magnus et al. (2012) suggested that leader-based humour has a positive effect on relationships with subordinates, increasing perceptions of the effectiveness of the leaders' performance and subordinate job satisfaction. This contradicts the broad-brush perceptions of some practitioners in the current study of the perceived need to reduce humour when communicating with senior management.

Broad-brush categorisations about the use of humour and gender were also shared in the current research study. Some practitioners suggested that risqué humour was more likely with a male audience than with a female one. Previous research supports this perception (Brown & Woodfield, 2024; Clason, 2019; Eriksen, 2019; Watts, 2007) as these studies found that females in male-dominated groups among manufacturing, construction and emergency service workers observed, then adopted humour styles to fit in with male colleagues. Previous research findings acknowledge that gender, in part, determines the way health and safety issues are communicated and adds to the rich and complex determination of an audience (Taylor et al., 2022). Yet in the current study, broad-brush categorisations of gender may have oversimplified the understanding and acceptability of humour.

Age was a further broad-brush categorisation considered in the present study. Both practitioners and receivers shared views that generational differences had a bearing on the acceptability of certain types of humour, for example, it was considered that older generations could be more open to humour that might nowadays be recognised as offensive, whereas younger receivers were perceived as more likely to be offended by such humour. Previous research acknowledges that the exposure of different generations of workers to relative historical timelines, in part, shapes perceptions of humour within workplace communication (Kim & Plester, 2014). Therefore, health and safety practitioners were also influenced by the age of receivers of their communication, and those perceptions led to adaptations in their use of humour.

The final broad-brush categorisation from the current research study focuses on the regional and cultural identity of receivers concerning humour and its uses in health and safety communication. Practitioners shared perceptions that workers in the North East of England were perhaps more receptive to humour during health and safety communication, as the region is noted for its joviality, with humour forming a central part of North East life (Colls & Lancaster, 2005). However, as most participants were from the North East of England there could be a case of ingroup attribution, where members may display attributional biases that favour the ingroup (Tajfel & Turner, 1979). Participants in other regions in the UK may provide a similar response to those in the North East. Furthermore, one participant working in the Middle East noted that the use of humour would not be expected during health and safety communication in that region. This finding contradicts, to some extent, the position of Mesmer-Magnus et al. (2012) who assert that humour is used in all cultures including the Middle East, including its workplaces (Khassawneh & Mohammad, 2022). However, the review of Lu (2023) recognised that humour is both culturally and regionally nuanced and further studies suggest it may be used for the purposes of cultural exclusion (Siegman, 2020; Wolfgruber, 2023). Therefore, a uniform approach to humour may not be successful in health and safety communication, and cultural, national, and regional identities would warrant a tailored approach.

Taken together, the broad-brush categorisations discussed suggest health and safety practitioners must navigate a fragmented and shifting social context created by those considerations, to determine the appropriate use of humour. Although such heuristics can be useful in making quick decisions about groups, they also have the potential to reaffirm negative and generic perceptions about the people in those groups. The use of such heuristics regarding humour is deep-seated in English culture (Yamamoto, 2022). It will be useful, therefore, for health and safety practitioners and receivers of their communication to understand the context and possible outcomes of using broad-brush categorisations before they use humour.

Organisational health and safety training and the room in which it took place were perceived by participants in the current study as influential in the use of humour. A perception shared by some practitioners and receivers in the present study was that attendees would initially consider health and safety training boring. The present results, which suggest the begrudging attendance of some workers, are consistent with the previous research of Cullen (2008), which found that learners could view health and safety training as formulaic, repetitive and dull, with humour being one counterpoint to reduce this perception. In the present study, practitioners were mindful of this and attempted to provide trainees with a positive and engaging experience of health and safety training to alter those perceptions.

Organisational health and safety training was perceived by some participants in this study as corralling workers into a training room to cover topics such as risk assessment and fire safety. The findings tentatively suggest that both the physical context of the training room and the health and safety training process were, unsurprisingly, more likely to elicit humorous content when compared to other types of health and safety communication, for example, during serious incidents. Alkiviadou's (2022) review suggested a partial explanation, in that humour about such incidents has the potential to shock or cause offence, limiting its use. The link between humour and organisational training has been recognised in previous research. Grugulis (2002) explored its use in management training, in which the training room provided managers with the freedom to use humour in contrast to the "politicised arena" (p. 402) of the normal working environment. While the results of the current study are consistent with the findings of Grugulis (2002), they reveal new knowledge, specifically in the context of health and safety communication. The organisational training room was perceived as providing a location away from the typical organisational setting. This established a pedagogical environment that was physically and psychologically separated from the normal working setting and practices. This may explain why humour was perceived by most practitioners and receivers as more frequently utilised during health and safety training when compared to the aforementioned "politicised arena" of the normal working environment. Previous research by Bakar and Kumar (2019) suggests that humour is used in the pedagogical context to facilitate teaching and learning during health and safety training.

Health and safety practitioners used their own experiences as a method to introduce humour in the training room, an approach which, according to them, elicited a positive response from receivers. The use of personal anecdotes, in this context, had the power to convey the emotion and meaning of data (Morse, 2006), using the humorous anecdote to condense learning into a lived experience. These findings are consistent with previous research by Cullen (2008), which encouraged a storied approach to health and safety training, suggesting personal experiences were more meaningful to receivers. This is consistent with the current research findings, however, the reason for sharing humorous real experiences was also the perceived enjoyment of the practitioners in using stories to deliver health and safety training. These findings are consistent with the review of Huber (2022), who suggested that the crafting of stories or anecdotes in humorous workplace communication is beneficial to both the communicator and the receiver as it provides a nuanced, sophisticated, and contextualised account of organisational issues that are accessible to receivers. In the present study, humorous anecdotes provided the practitioner with a meaningful communicative tool to convey health and safety information, while the anecdote provided receivers with a sensemaking (Brown et al., 2015) plausible narrative.

Health and safety practitioners in the present study often used a self-deprecating style of humour in the training room. Self-deprecating or self-defeating humour could be described as humour directed at oneself for the amusement of others, and/or self (Martin et al., 2003). Some receivers perceived the incongruity of health and safety practitioners recalling personal mishaps as humorous when juxtaposed with their role as a health and safety practitioner. The finding aligns with incongruity theory (Deckers & Devine, 1981) with receivers' expectations of health and safety practitioners being violated, which elicited a humorous response. One interpretation of these findings is that practitioners used self-deprecating humour during training to avoid feelings of embarrassment for the attendees of the training, by making themselves the target of humour and not the attendees. This interpretation reveals new knowledge in the health and safety context and is consistent with the findings of Heintz and Ruch (2018) who suggested that self-deprecating humour was less likely to make people feel defensive. However, this was a general study, and further research would be required to confirm this phenomenon in the health and safety training environment.

The final perception reflects the views of some receivers in the current research study that practitioners needed to have confidence in the training subject matter to permit the use of humour. Previous statistical analysis by Yeo et al. (2020) suggested that scientists' humorous communication correlated with their perceived expertise among receivers. Yeo et al.'s findings suggest that receivers in the current research study could have viewed practitioners' humorous communication as an indicator of their perceived expertise in the health and safety training topic. Taken together, the findings of Yeo et al. (2020) and the present study suggest a harmonious relationship between perceptions of a practitioner's expertise in health and safety and the use of humour to convey that expertise in the training room. Paradoxically, the use of humour may have increased perceptions of a practitioner's competence and not decreased them.

5.3 RQ2 - What do health and safety practitioners and employees consider the effects of using humour in health and safety communication?

Four key perceived effects of using humour emerged across two of the four themes; in theme one (*the humorous robot – using humour to 'humanise' the formulaic nature of the role)* the discussion concerns how humour helped health and safety practitioners convey their humanity; in theme four (*more than a laugh – the enduring effects of humour)* the effect that humour had on the compliance of others is explored, then the discussion moves on to how humour affected the retention of knowledge in health and safety communication, and, finally, the effect of humour on the interaction between health and safety practitioners and employees is discussed.

5.3.1 The humorous robot – using humour to 'humanise' the formulaic nature of the role

This theme explored how humour assisted the health and safety practitioner in communicating the sometimes dry and formulaic content of health and safety information. One insight from both practitioners and receivers was that humour made the health and safety practitioner appear "more human" because some practitioners perceived that health and safety communication has the potential to be robotic – i.e., delivered in a formulaic and emotionless manner; and practitioners could equally be perceived as robots rather than human beings. Therefore, the use of humour could offer a counterpoint to this perception.

Previous research has explored the use of humour in workplace communication to establish one's identity (Tracy et al., 2006). Tracy et al.'s ethnographic study of emergency service workers did not explore the robotic nature of occupational communication, however, it found humour was essential in providing a sense of self beyond an occupational role and among peers. Similarly, in the present study, as practitioners have the responsibility to deliver health and safety communication to employees, humour had the potential to provide a sense of self for the practitioner among the potentially dry subject matter of their communication. Huber and Brown (2017) might describe such identity work by practitioners as personalising (being oneself), allowing practitioners to convey a more human identity to the receivers of their communication. Meyer (2000) would suggest that using humour as a means to show humanity evokes a sense of shared meaning between the communicator and receiver. In the present study, the use of humour by the practitioners made them seem part of the same group as receivers, and laughing together reaffirmed the practitioner-receiver in-group acceptance.

Concurrently, to further display their humanity, some practitioners and receivers in the current research study suggested that humour had the effect of displaying individuality. Humour may have provided a mechanism to unveil the person behind the health and safety communication. Previous theoretical research has found that the oppressive nature of some workplaces can stifle individuality (Zekavat, 2023). Zekavat suggested that workers in organisations driven by profits and targets take on a machine-like function, and humour was used as a resistance strategy to retain a sense of individuality. Some practitioners in the present study also highlighted the dehumanising effect of work, and were ardent in the defence of self, using humour in part to define individuality within their organisational role and during health and safety communication.

The findings of the present study also highlight that increased perceptions of authenticity were an effect of displaying one's humanity, which did not have to affect the importance of health and safety communication. Some practitioners and receivers suggested that humour provided a basis to demonstrate authenticity, enabling a truthful depiction of one's positives and negatives through humour. Previous quantitative research suggests that humour can both affirm the 'real self' (authenticity), and also project an ideal self (i.e., how they would ideally like to be perceived) (Martin et al., 1993). Martin et al.'s study found that humour could provide a positive self-concept of an authentic self. This suggests that practitioners in the current research study who utilised humour as part of normal workplace discourse were more likely to convey their 'real self' and be authentic. The display of authenticity through humour was also appreciated by some receivers of health and safety communication, with practitioners garnering respect for the ability to use humour and the display of an authentic self. Furthermore, receivers suggested this did not diminish the importance of the health and safety message conveyed.

5.3.2 More than a laugh – the enduring effects of humour

In the current study, this theme suggested there were diverse effects in using humour. Health and safety practitioners used humour to increase the compliance of employees with health and safety requirements. Humour also appears to have had the effect of increasing knowledge retention of those requirements and encouraging further interaction with practitioners and receivers.

The results of the current research study are consistent with past empirical studies regarding the use of humour as a compliance-gaining strategy. Mullany's (2004) ethnographic study found female senior managers used humour more readily than their male counterparts as an explicit yet subtle means to gain compliance in business meetings or, as Butler (2015) theorised, by organisations to subvert opposition to corporate objectives. These findings demonstrated humour's elasticity as a compliance-gaining tool for various organisational actors. Most of the practitioners and receivers in the present study discussed compliance as a possible effect of using humour in health and safety communication. However, these findings suggest that humour provided a subtle pathway to compliance and that using it made following rules more palatable for receivers (see also Mullany, 2004) Previous research is consistent with these findings, highlighting the link between power/compliance and using humour as an indirect, yet explicit, means to achieve it. The empirical study of Lynch (2009) found chefs used humour to exert power over kitchen staff, as previously mentioned. Watts' (2007) ethnography found women within the construction industry used humour explicitly to gain compliance in a male-dominated environment. In the present study, humour was also found to be a subtle yet explicit way for practitioners to gain the compliance of receivers with health and safety objectives, which helped provide a safer working environment for all. Interestingly, we now know as a result of this study that using humour to subvert perceptions of health and safety practitioners as authoritarian may have had an unintentional paradoxical effect. By implicitly exerting the power (through humour) they were trying to mitigate, practitioners gained the compliance of receivers.

The findings of the present study also suggest an alternate means of achieving compliance by using humour to highlight non-compliance. Some practitioners provided examples of workers' non-compliance with health and safety rules and then used humour to identify it during health and safety communication. In doing so, those practitioners recognised humour as a less threatening communicative strategy to encourage workers to do the opposite of their previous behaviours and comply. The findings are consistent with previous empirical studies (Heiss & Carmack, 2012; Lynch, 2009) in which existing staff used humour to identify the non-conformance of newcomers to the workplace. The findings of the current study mirror those of Taylor et al.'s (2022) review, tentatively suggesting that health and safety practitioners in the current research study may have used non-compliance humour both to reaffirm rules and lessen the emotional impact of highlighting non-conformance. This is consistent with politeness theory (Brown & Levinson, 1987), which explores various notions of politeness in social interactions, yet reveals new knowledge in health and safety communication. Specifically, in the present study, using humour to highlight non-conformance would be termed a "negative politeness" strategy by Brown and Levinson (1987), which both softens criticism and reduces potential challenges to that criticism. Practitioners used humour to avoid the embarrassment of highlighting the receiver's non-conformance and reduce the threat to the receiver's self-esteem.

A further finding regarding compliance was that some practitioners highlighted the use of humour to achieve more enduring behaviour change. Some practitioners provided examples of this practice, for example, the wearing of masks during the coronavirus pandemic lockdowns. In this context, humour was used by practitioners to encourage workers to comply with UK government requirements and wear face masks. Although the coronavirus pandemic lockdowns provided a relatively unique context, previous research by Meyer (2000) suggested that the use of humour to achieve continual compliance with rules may tread a fine line between unification and division; this duality paradox can both unify and divide at the same time. Zekavat's (2023) review found that continually using humour to achieve compliance in the workplace may push receivers toward division, resulting in subversive ridicule and potential defiance. Taken together, these findings indicate that humour had the ability to encourage worker compliance with health and safety rules, as reflected in the results of the present study, yet its overuse could have had the opposite effect. Therefore, practitioners were tasked with perceiving when humour begins to divide and not unify.

The next key finding from the present study was that most practitioners and receivers highlighted the effect of humour on the retention of health and safety knowledge. Various examples were given of how humour provided a ‘cognitive hook’ for health and safety information, such as humorous communications about Valentine’s Day and the safe use of candles. This is consistent with Meyer (2000) who theorised that clarification was one of the functions of humour in communication, making the information memorable, i.e., providing a ‘cognitive hook’. Huber’s (2022) review related this phenomenon to workplace communication suggesting humour provided a novel frame of reference for knowledge. The findings of previous research (Huber, 2022; Meyer, 2000) support the notion that humour assisted the retention of health and safety information for receivers during health and safety communication, by fusing that information to humorous (and seemingly more memorable) dialogue.

Furthermore, the use of humour to identify key health and safety information was also a finding in the current research study. Some practitioners and receivers articulated how humour was fused with significant events, such as evacuating the building on hearing the fire alarm, which appeared to assist with the recall of information related to those key events. Once more, as theorised by Meyer (2000), the clarification of key issues or positions can be encapsulated within a short anecdote. Adding humour within the information requires a deeper level of processing by the receiver, aligning with Craik and Lockhart's (1972) three levels of processing theory: structural, phonetic and semantic. Humour requires semantic processing, which is a deeper analysis that leads to better recall. The results of the present study imply that by using humour, practitioners embedded key health and safety information in the long-term memory of receivers. Therefore, this assisted receivers with the recall of what to do when the fire alarm activates.

A further effect from the current research study found that using humour during health and safety communication increased interaction between practitioners and receivers. Most of the receivers in the present study suggested that humour made health and safety practitioners appear more approachable. A previous review by Romero and Cruthirds (2006) suggested that an affiliative humour style (non-threatening) was likely to enhance social interaction. The authors also indicated that self-defeating humour reduced the speakers' status and made them appear more affable. It appears that a perception from earlier in this discussion – that practitioners use self-defeating humour to level out perceived power imbalances – provided a simultaneous mechanism to increase interaction with the receivers of health and safety communication.

This research has established that the informal nature of humorous dialogue between health and safety practitioners and receivers provided a basis for increased interaction. This finding is consistent with Wolfgruber's thematic analysis of organisational humour, which found that affiliative/positive humour acted as an informal "social glue" (2023, p. 40) between workers. Furthermore, the aforementioned empirical study with women in the construction industry by Watts (2007) found humour facilitated informal discussions with peers, nurtured workplace relationships and increased future interaction. Practitioners and receivers in the current study appear to have experienced a similar effect as humour increased the bond between them, making the relationship congenial and increasing the approachability of the practitioner.

A further effect of the increased interaction between practitioners and receivers in the current research study was that information appeared more forthcoming from receivers. Huber's (2022) review suggested organisational humour can shift the frame of reference during communication and emancipate otherwise hidden knowledge. Concurrently, the thematic analysis of Sumagna and Vijaya (2023) found that soldiers developing bonds in the Indian army were more likely to share knowledge during humorous dialogue. These findings are consistent with the results of the present study. Most practitioners acknowledged that humour assisted in the transfer of health and safety information from receivers, uncovering key health and safety concerns that may have remained unreported otherwise, revealing new knowledge within health and safety communication.

The facilitative relationship between humour and practitioner-receiver interaction appeared to affect the ease with which receivers aired those concerns about health and safety. Some practitioners and receivers suggested that humorous dialogue made the broaching of health and safety issues easier. Previous research has found humour can be deployed to deal with difficult subjects; for example, Hammett et al. (2023) found this phenomenon present in their review of African political humour. Interestingly, in the present study, the concerns were not necessarily confrontational but represented knotty issues, for example, repeated organisational failings to remedy health and safety concerns. The increased interaction between practitioners and receivers – assisted by humour – appears to have made those knotty issues easier to navigate. This finding aligns with the *relief theory* of Shurcliff (1968) – as discussed in Chapters 1 and 2 – with humour having the effect of tension relief between practitioners and receivers when broaching those knotty issues.

Finally, evidence from the present study found that some practitioners and receivers acknowledged that because of the increased interaction, receivers approached practitioners to seek validation for their actions to improve health and safety. The review of Krach et al. (2010) utilises the Theory of Mind (ToM) (a mental processing model for human communication) to explain social interaction, which assists in the interpretation of the current study's findings. The authors would suggest that practitioners in the current study were empathic to receivers' emotional state (affective ToM) and rationally inferred receivers' intentions and thoughts (cognitive ToM).

Subsequently, this deepened the social bond between practitioner and receiver, to the extent that receivers sought cognitive reward for their actions. In practical terms, receivers got confirmation of the acceptability of their work and, cognitively, they received rewarding social stimuli from the interaction.

5.4 Theoretical implications

The theoretical implications of the current study also reflect the 'real' layer of reality within critical realism (Haigh et al., 2019) and the causal mechanisms that may be behind the use of humour in health and safety communication. There are five theoretical implications discussed: 1. *Superiority theory* (Gruner, 1997), 2. *Levels of processing theory* (Craik & Lockhart, 1972), 3. *Change theory* (Lewin, 1951), 4. *Leader-member exchange (LMX) theory* (Graen & Uhl-Bien, 1995) and, 5. *Emotional intelligence (EI)* (Salovey & Mayer, 1990).

The first theoretical implication of this study concerns *superiority theory* (Gruner, 1997) – as discussed in Chapters 1 and 2 – in which humour is used to gain a sense of superiority or power. We now know, as a result of this study, that there is a potential theoretical paradox from these findings regarding *superiority theory*. Health and safety practitioners utilised humour to avoid perceptions of being viewed as authoritarian, in an explicit attempt to reduce any perceived power imbalance between practitioner and receiver. However, humour appears to have assisted in achieving the compliance of others during practitioner and receiver interactions. The simultaneous reduction of authoritarian perceptions and achieving the compliance of receivers through humour could be described as a power paradox - as previously discussed (see Section 5.3.2).

The findings of the current study also have implications for memory-based theory. The *levels of processing theory* (Craik & Lockhart, 1972) – as previously discussed (see Section 5.3.2) – identifies three levels of processing: structural, phonetic and semantic. The interpretation of humour requires deeper analysis (semantic) and appears to assist with the memory or recall of the information (Carlson, 2011). Although Carlson's statistical analysis acknowledged that humour assisted the recall of information, the study suggested that why this happens is not fully understood and requires further research. It is postulated from the findings of the current research study that the recall of health and safety information is assisted by humour. The semantic processing that interprets the humour may intertwine with health and safety information and fuse the humour and information together, providing a 'cognitive hook'. This suggests that humour and semantic processing are important mechanisms in the recall of health and safety knowledge.

The findings that discussed how the role of health and safety practitioners changed with an associated increase in the prevalence of humour (see Section 5.2.2) have theoretical implications. Several behavioural change theories exist, notably the behaviour change wheel developed by Michie et al. (2011), which both characterises and informs behavioural change interventions. This theory incorporates the COM-B system, which recognises that capability, opportunity and motivation affect behaviour. However, the evolution of the health and safety role in this study is ably described by the *change theory* of Lewin (1951). *Change theory* suggests a three-stage model: unfreezing, change and refreezing. In stage 1, health and safety practitioners may have felt discomfort as previous beliefs about the role seem invalid – i.e., the role becomes less about rule enforcement and more about employee engagement, increasing the need for humour. In stage 2, the adaptions that health and safety practitioners need to make to fulfil the new requirements become clear, so practitioners adapted to spend more time engaging with workers, with humour assisting this process. In stage 3 the new behaviour of the health and safety practitioner, i.e. increased engagement with workers and the use of humour became habitual for some practitioners. These findings highlight a potential temporal increase in the inclusion of humour as the role of the health and safety practitioner evolved. Taylor et al.'s (2022) review concluded that there was a temporal/linear nature to workplace humour from the beginning of an employee's tenure, across several studies; the findings of the present study represent a comparative temporal increase in humour by health and safety practitioners as levels of worker engagement escalated. It is therefore posited that Lewin's *change theory*, in this context, encapsulates the evolution of health and safety practitioners over the past decades. Based on the findings of this study, it is now understood that humour provided a key communicative tool to assist in the change process and remains the case for contemporary health and safety practitioners. However, the findings also suggest that some practitioners have retained an authoritarian approach (as discussed in Section 5.2.2) that eschews humour, representing a reluctance to unfreeze, which warrants further investigation.

The findings of the present study are also consistent with the *leader-member exchange (LMX) theory* (Graen & Uhl-Bien, 1995) – as discussed in Chapter 2 – which posits that the quality of the dyadic relationship is based on the degree of trust, loyalty and respect between the respective parties. In this case, the health and safety practitioner would be considered as the leader and the workers as a follower. Waterlow's (2013) study suggested that sharing humour developed bonds based on trust. Therefore, as the health and safety practitioner-worker relationship developed, humour increasingly formed a component of engagement, enabling the health and safety practitioner to develop trusting relationships with workers. The contemporary health and safety practitioner role suggests that humour serves a progressive leader-member relationship – which begins with mutual respect, then influences respective behaviours as trust is developed and, finally, results in the development of shared goals. As the progressive relationship between the health and safety practitioner and other workers developed, the use of humour performed an increasing role in the various practitioner-worker dyadic relationships.

A further theoretical implication from the current study is the possible mechanism between the health and safety practitioner, humour, and *EI* , described as "the ability to carry out accurate reasoning about emotions and the ability to use emotions and emotional knowledge to enhance thought" (Mayer et al., 2008, p. 511). It is acknowledged, however, that this possible mechanism could be due to several factors, including individual-level mechanisms such as confidence, learned communication styles and communication skills, as well as contextual factors such as workplace culture and relationships with colleagues. Nevertheless, *EI* was first theorised by Salovey and Mayer (1990). *EI* was further developed by Goleman (1995) and Bar-On (1997) into a mixed model. The mixed model acknowledges that some individuals may have a general disposition for *EI*, while others can develop the ability to use *EI* over time. Further research has found a correlation between higher *EI* and the appreciation and use of humour (Gignac et al., 2014; Yip & Martin, 2006; Zahra et al., 2020). While the review of Rosenberg et al. (2024) recognises the importance of *EI* in leader-based humour, providing a framework for how and when to use humour effectively. The findings of the current study imply that health and safety practitioners using humour may require a requisite level of *EI*. The quantitative findings of Gignac et al. (2014) support this assertion, suggesting that individuals using humour have higher *EI* than individuals who do not.

Furthermore, it is posited that current health and safety practitioners using humour may already have a disposition for *EI* or have developed their *EI* with the assistance of humour. To support this alignment with the mixed model of *EI* (Goleman, 1995), further research findings have highlighted the potential for humour to increase one's *EI* (Melenets et al., 2022), in this case for teachers, as the use of humour requires a sensitivity to others' emotions. Conversely, Zahra et al. (2020), in their study of university students, found that those with higher levels of *EI* already had a greater appreciation of humour and were more likely to use it. The results of the current research study and previous research suggest that practitioners who used humour in workplace communication may have had higher levels of *EI*, whether innate or developed.

5.5 Strengths and limitations

5.5.1 Limitations

Several limitations should be noted concerning the results of the current study, including the effects of the coronavirus pandemic, transferability, difficulties with participant recruitment and the researcher as a practitioner (which was both a limitation and a strength).

The coronavirus pandemic provided both challenges and opportunities for this study. The beginning of coronavirus restrictions for the UK in March 2020 coincided with the start of data collection and participant interviews; subsequently only the first interview was face-to-face. All other interviews were completed with video conferencing tools such as Microsoft Teams due to the coronavirus restrictions. The change to the nature of the interview medium may have affected the dynamics of the conversation and responses from participants (Thunberg & Arnell, 2021). However, almost all the interviews were conducted when the UK population were told to stay at home. This provided a unique timeframe in which to conduct research and collect data. Participants were keen to get involved and appeared to appreciate the human interaction the interviews brought (Singh & Singh, 2020). Additionally, because of fewer distractions, participants were able to fully focus on the questions being asked, allowing more time to reflect on their answers. The coronavirus pandemic also had an effect on the recruitment of the receiver group. The health and safety practitioners recruited as participants were also key in assisting with the recruitment of workers from their organisations for the receiver group. However, the coronavirus pandemic led to an increased demand for health and safety practitioners' time (and other managers) (Hamouche, 2021), subsequently making that assistance difficult to gain.

A further limitation concerned the characteristics of the participant group. The participants in this study were drawn from Northern England and were mostly male (77%), and all were of white British ethnicity, which created a lack of cultural diversity. There was, however, diversity in the different working practices and industrial cultures in which the health and safety practitioners were situated. Those from different regional, national, or racial backgrounds could have different experiences and perceptions of humour (Lu, 2023), and therefore, future researchers should exercise care regarding the transferability of the research findings to other contexts.

The recruitment of receivers posed a significant challenge. The receiver group were not as connected to the study or the researcher as the health and safety practitioners were (as peers), giving the researcher outsider status (Merriam et al., 2001) and the coronavirus pandemic shifted organisational priorities. Recruitment, therefore, proved difficult apart from one organisation, which provided the five receivers who were interviewed. Despite repeated attempts to attract further receiver participants, a decision was made to cease recruitment in December 2021. The low recruitment and smaller sample size in the receiver group may have affected the heterogeneity of shared perceptions and the study’s credibility (Vasileiou et al., 2018). However, most receivers shared experiences from past organisations and health and safety practitioners, which in part counter the limitations regarding credibility. Braun and Clarke (2022) also suggested that thematic analysis allows flexibility to explore smaller participant groups, whether they were more homogeneous or heterogeneous.

Another limitation in this study involved the researcher as a practitioner. This study involved 13 interviews with health and safety practitioners, who were peers. This provided a common professional understanding that appeared to assist with rapport and reduce any misunderstandings about the subject matter. However, the position of the researcher may have led to affinity bias, a human behavioural phenomenon which involves people interacting with others who have similar perspectives (Heidari et al., 2023). This may have influenced the research questions posed and how the answers were interpreted.

5.5.2 Strengths

Despite these limitations, the present study has notable strengths, including the provision of new knowledge, a peer-reviewed systematic review, the use of RTA and the demonstration of both transparency and rigour during the research process which included following the American Psychological Association's Qualitative Research Reporting Standards (JARS-Qual) (Levitt et al., 2018).

Although occupational humour has been the subject of numerous empirical studies – particularly since the turn of the millennium – to the author's knowledge, this study represents the first attempt to explore the perceptions and effects of humour in health and safety communication. The present study, therefore, contributes to a growing body of evidence on occupational humour.

The systematic literature review (see Chapter 2) was peer-reviewed and published by Taylor et al. (2022). The peer review process provided feedback and perspectives on the literature review from three reviewers, which were taken into consideration. Subsequently, several of the reviewers' recommendations were accepted and incorporated into the literature review. The inclusion of a systematic review and the subsequent peer review process increases the credibility of the overall thesis, as highlighted in the study of Ringsten et al. (2024).

The use of RTA (Braun & Clarke, 2019) provided a robust analytical approach to understand the patterns across data from participant interviews. While other forms of analysis were considered, RTA was congruent with this study's research questions and a fitting methodological tool to answer them. Pragmatically, it also provided a credible approach which allowed thoughtful and reflexive engagement for the lone researcher (Byrne, 2021).

A further strength involved the transparency of the research process. Participants were fully briefed on the purpose and content of the research and their rights regarding their voluntary participation. Furthermore, the reflexive position of the researcher as a health and safety practitioner means readers are aware of the researcher's active role throughout the study (Mackieson et al., 2018).

A final strength involves the rigour with which this research was undertaken. Several examples demonstrate this including the use of the CASP tool (2018) to assess the quality of studies included in the systematic literature review (see Chapter 2), the detailed six-phase analysis processing of data associated with RTA (see Chapter 3) (Braun & Clarke, 2021a) and utilisation of qualitative research quality guidelines throughout this study (Yardley, 2000).

5.6 Practice, policy and personal implications

5.6.1 Implications for practice

The subject of workplace humour has been a well-researched topic over the last few decades. However, as already identified in this study, the specific area of health and safety at work and humour has been under-researched. The findings of this study recognise the role that humour plays in workplace interactions between health and safety practitioners and receivers of their communication, and highlight the contribution it can make to health and safety communication while recognising the perceived boundaries of its use. Guidance could be provided for health and safety practitioners centred around the use of humour as a legitimate communicative tool in the workplace, particularly in the training environment, potentially through IOSH. Occupational humour is multi-functional, providing several outcomes simultaneously, such as displaying individuality (Zekavat, 2023), increasing engagement (An et al., 2023), helping knowledge retention (Huber, 2022) and encouraging compliance (Mullany, 2004). Therefore, practitioners can utilise the findings of this research in day-to-day communication with other workers. The findings regarding the nuanced functions of humour in this context can perhaps help practitioners understand what humour is achieving and if, and when, they could use it. Guidance, possibly co-created between the researcher and IOSH, could be utilised by health and safety practitioners, some of whom were perceived as reluctant to use humour earlier in the study (see Section 5.2.2). For example, explanations of personality types and links to humour (Plessen et al., 2020) and the boundaries of acceptable humour (Martin et al., 2004) could help those practitioners understand themselves and encourage humour-based dialogue.

A further implication of these findings could be an effect on the recruitment of health and safety practitioners. The perceptions and effects of health and safety practitioners using humour in communication in this study, could alter the criteria organisations use to assess the suitability of practitioners in the future.

5.6.2 Implications for policy

The guidance provided to health and safety practitioners on the use of humour has been scarce and, in some cases, cautious (Lundgren & McMakin, 2013) or discouraging (Anderson & Miller, 2017). However, articles published in safety magazines and websites – over the same timeframe – have provided a positive view of its use by health and safety practitioners, for example by Silliker (2015) and Bottino (2021). Yet, to my knowledge, this has not been subject to peer-reviewed research. The findings of the present study, therefore, could provide a catalyst for change in how humour is perceived and used by health and safety practitioners, and perhaps could be incorporated into updated health and safety guidance for practitioners. National health and safety bodies in the UK such as IOSH could use the evidence from this study to update national guidance on health and safety communication for practitioners. The researcher will assist this process by sharing the findings with IOSH and assisting with the drafting of guidance where required.

5.6.3 Personal implications

From a personal point of view, the PhD process has had an indelible effect on me, from the first day of meeting academic supervisors and fellow students in 2017 with feelings of imposter syndrome. I have grown with each step in the process and have found this research both challenging and rewarding. The research process has provided lessons far beyond this study, on fortitude and resilience.

As a practitioner, I am reminded of the initial purpose of this study, which was to contribute, in some small way, to the improvement of people's health and safety while they are at work. The insights of both fellow practitioners and receivers with whom they communicated provide inside views on humour within health and safety. As a result, I have a deeper appreciation of the multi-faceted effects humour can have, both during and after communication. I will, therefore, continue to be influenced by these findings as a practitioner and may also conduct further research on this subject matter.

5.7 Future research

While this study is the only one conducted that has focused specifically on the function of humour within health and safety communication, it raises a variety of intriguing questions for future study. Although this study had certain limitations – all participants were from a White ethnic background in a particular region of the UK. This limitation could be addressed by future research elsewhere, as an opportunity exists to repeat this study in different regions, countries, and cultures, where participants may have different experiences and perspectives, which may reinforce the transferability of the current research study's findings or highlight nuanced differences across those countries and cultures.

A further area for future research could focus on the prevalence of humour during organisational health and safety training. This study found that the organisational training room was a location where humour was used during health and safety communication for training purposes. The use of humour appeared to increase during organisational health and safety training when compared to other forms of health and safety communication. It would be useful to extend the current findings by exposing the reasoning provided in the present research to further empirical study, perhaps utilising a controlled trial

The research also highlighted perceptions regarding the evolution of the health safety practitioner's role. Further research could explore how and why this role has altered, whether current practitioners have adapted and if those changes are now attracting people with different skill sets to address the contemporary requirements of the role. Equally, future research could also explore the reasons why some health and safety practitioners have struggled with the changes to the role that now require higher levels of staff engagement.

An exploration of the threshold of acceptable humour within health and safety communication would also be beneficial. This study suggested that there were some 'off-limits' topics that should not be joked about, for example, industrial accidents involving fatalities. However, as discussed, the use of dark humour in other professions such as emergency services do not exclude such topics. It would be interesting to determine if different occupational groups have varied levels of acceptable humour.

5.8 Conclusions

This study followed a suggestion that "there's no better policy in a society than pursuing the health and safety of its people" (Hirschkorn, 2015). To that end, this research aimed to gain an understanding of the perceptions and effects of using humour in health and safety communication, with the desire of contributing to that societal objective of improving the health and safety of people at work. Despite the limitations discussed (see 5.5.1), this research has produced valuable insights into humour's multi-faceted role during health and safety communication. Implications for policy, practice and future research are advocated to help understand the role of humour in health and safety communication.

The "thoughtful self-questioning" (Braun and Clarke, 2022, p.15) exercised during this study has led the researcher to reflexively consider their own experiences, values and assumptions in reading the literature and interpreting the data. A particular challenge was acknowledging humour's complex and multi-faceted nature (Meyer, 2000), which was subsequently reflected during data analysis and in the findings of the present study. The researcher remains astounded at the simultaneous ability of humour to implicitly and explicitly produce diverse outcomes.

We now know, as a result of this study, that a perception shared by participants illuminates the part humour played in the evolution of the health and safety practitioner role. The use of humour seemingly increased as practitioners engaged more with employees. As the health and safety role became more people-oriented and connections between practitioners and receivers of their communication matured (Morrison & Smith, 2013), the prevalence of humour escalated.

This study revealed new knowledge concerning the perception that the organisational training room and the health and safety training process combined to create a pedagogical environment that appeared conducive to humour, away from the "politicised arena" of the normal working environment (Grugulis, 2002, p. 142). This finding supports previous research regarding the use of humour in education (Bakar & Kumar, 2019) and how it facilitates learning. However, previous research had not identified this phenomenon in health and safety training. It is hoped that the current research will stimulate further investigation of this important area.

The power paradox illuminates new knowledge in health and safety communication and a nuanced interpretation of superiority theory (Gruner, 1997). Practitioners used humour to eschew the reputation of health and safety practitioners as being authoritarian, and sometimes used self-defeating humour to do so. It appears that humour used for these purposes may have a paradoxical effect. In using humour, practitioners may have implicitly exerted the power they were trying to mitigate by encouraging the compliance of receivers with health and safety requirements.

The perceived effects of using humour in health and safety communication were equally enlightening. As a result of this study, we now know that humour allowed health and safety practitioners to convey their humanity and individuality. Humour strengthened the sense of self for practitioners and displayed a human identity to receivers beyond their occupational role (Huber & Brown, 2017), while evoking a shared meaning of health and safety for both parties.

Simultaneously, the multi-faceted nature of humour encouraged further effects, while the recognition of these phenomena in the context of health safety communication provides original contributions to knowledge. In support of previous research regarding humour and increased compliance (Butler, 2015; Mullany, 2004; Punyanunt, 2000; Yedes, 1996) the humour shared between health and safety practitioners and receivers appeared to increase compliance with health and safety rules. Humour also appeared to assist with the knowledge retention of receivers (Carlson, 2011; Huber, 2022) providing a 'cognitive hook' for health and safety information. The use of humour also had the effect of increasing the interaction (Romero & Cruthirds, 2006; Taylor et al., 2022), in this study between the health and safety practitioner and receiver. Although previous research has identified the link between workplace humour, compliance (Mullany, 2004), knowledge retention (Huber, 2022) and increased worker interaction (Romero & Cruthirds, 2006).

Although the transferability of the current findings must be established by future research, the present study has provided a clear understanding of the potential valuable contribution humour can make to health and safety communication. Although the use of humour comes with the potential risk of offending receivers (Plester, 2013; Watts, 2007), the potential benefits of improving health and safety communication and the safer behaviours that come with it suggest that its use would be for the greater good.

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Appendices

Appendix A

Table A1

Search terms for literature review

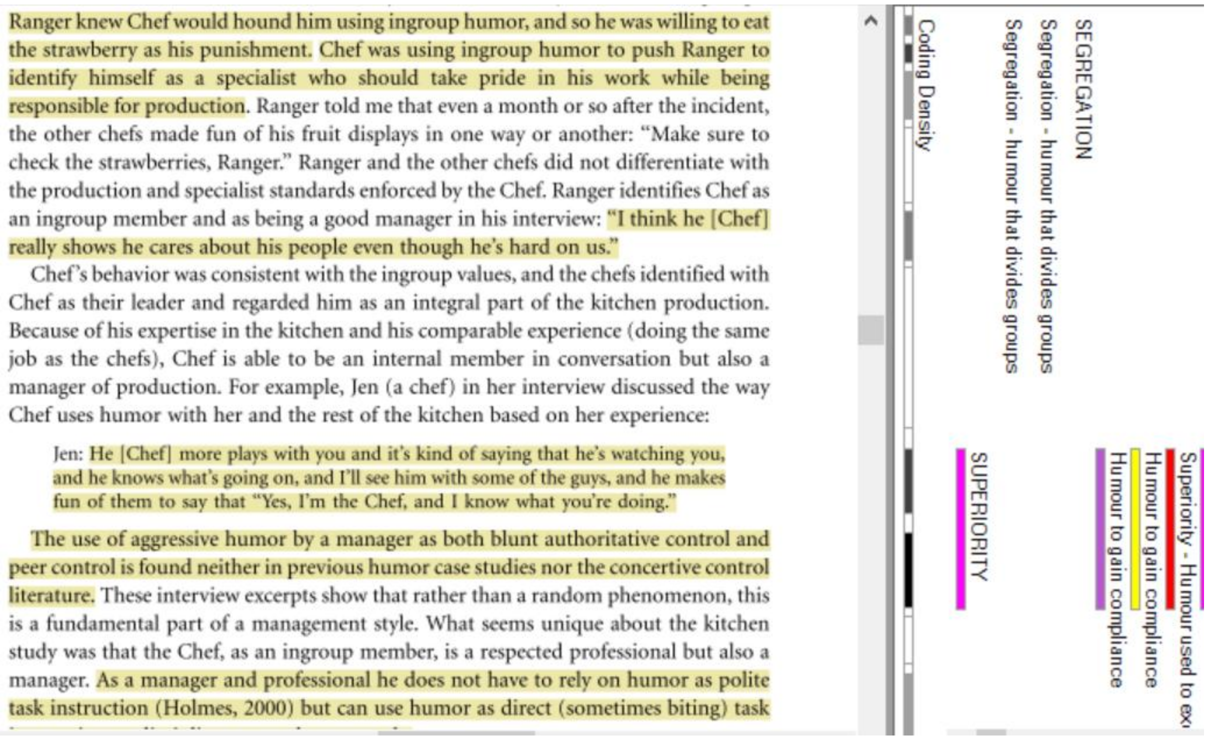
Group 1	**Group 2**	**Group 3**
Humour	**Communication**	**Workplace**
Humo*	Communicat*	Organisation*
Laugh*	Talk*	Organisation*
Banter	Convers*	Corpora*
Jok*	Correspond*	Company
Amus*	Intercomm*	Workplace
Mirth	Contact*	Industr*
Comic*	Connect*	
Comed*	Articulat*	
Joc*		
Wisecrack		

Note. This table details the search terms used on various databases during the literature search for the systematic review in Chapter 2.

Appendix B

Figure B1

Example of NVivo coding from literature review



Appendix C

Figure C1

Recruitment Flyer

Appendix D

Participant information sheet

An exploration of the perceptions and effects of using humour in health and safety communication

For further information about how Lancaster University processes personal data for research purposes and your data rights please visit our webpage: www.lancaster.ac.uk/research/data-protection

My name is Stephen Taylor and I am conducting this research as a student in the Organisational health and wellbeing programme at Lancaster University, Lancaster, United Kingdom.

What is the study about?

The purpose of this study is to explore how the use of humour is perceived in health and safety communication by those involved, and to understand the potential effects of using humour in such situations. To understand this, interviews will be conducted with health and safety practitioners, and the workers from their organisation they communicate with on a regular basis.

Why have I been approached?

You have been approached because the study requires information from both people who are in an active health and safety role and the workers they communicate with on a regular basis.

Do I have to take part?

No. It's completely up to you to decide whether or not you take part.

What will I be asked to do if I take part?

If you decide you would like to take part, you would be invited to take part in a 30-45-minute semi-structured interview about how humour is used in health and safety communication.

Will my data be Identifiable?

The information you provide is confidential. The data collected for this study will be stored securely and only the researchers conducting this study will have access to this data:

- Audio recordings will be stored on a secure encrypted device and once the project has been examined and submitted for publication they will be deleted.
- The files on the laptop computer and OneDrive cloud storage will be encrypted (that is no-one other than the researcher will be able to access them) and the computer itself password protected. Then archived for 10 years.

- The typed version of your interview will be made anonymous by removing any identifying information including your name. Anonymised direct quotations from your interview may be used in the reports or publications from the study, so your name will not be attached to them.
- Access to anonymised data will be provided to genuine researchers only, on request.
- All your personal data will be confidential and will be kept separately from your interview responses.

There are some limits to confidentiality: if what is said in the interview makes me think that you, or someone else, is at significant risk of harm, I will have to break confidentiality and speak to a research supervisor about this. If possible, I will tell you if I have to do this.

What will happen to the results?
The results will be summarised and reported in a doctoral thesis and may be submitted for publication in an academic or professional journal.

Are there any risks?
There are no risks anticipated with participating in this study. However, if you experience any distress following participation you are encouraged to inform the researcher and contact the resources provided at the end of this sheet.

Are there any benefits to taking part?
At the beginning of the interview you will be offered the opportunity to entered in a prize draw for a £50 Amazon voucher. You will be entered even if you choose not to complete the interview. The winner will be notified by a mutually agreed means of communication. Refreshments and snacks will be made available during interviews, and out of pocket travel expenses will be reimbursed up to £10 per participant. Although you may find participating interesting and recollection of humorous events may elicit positive feelings, there may be no direct benefits in taking part.

Who has reviewed the project?
This study has been reviewed and approved by the Faculty of Health and Medicine Research Ethics Committee at Lancaster University.

Where can I obtain further information about the study if I need it?
If you have any questions about the study, please contact the main researcher:

Stephen Taylor
s.taylor20@lancaster.ac.uk

Supervisors

Dr. Claire Hardy
c.hardy1@lancaster.ac.uk
01524 593321

Dr. Jane Simpson
j.simpson2@lancaster.ac.uk
01524 592858

Complaints
If you wish to make a complaint or raise concerns about any aspect of this study and do not want to speak to the researcher, you can contact:

Dr. Katharina Janke - Tel: +44 (0)1524) 595103
Programme Director, Email: k.jankemarie@lancaster.ac.uk
Health Research Division
Lancaster University
Lancaster
LA1 4YW

If you wish to speak to someone outside of the [name of] Doctorate Programme, you may also contact:

Professor Roger Pickup Tel: +44 (0)1524 593746
Associate Dean for Research Email: r.pickup@lancaster.ac.uk
Faculty of Health and Medicine
(Division of Biomedical and Life Sciences)
Lancaster University
Lancaster
LA1 4YG

Thank you for taking the time to read this information sheet.

Resources in the event of distress

Should you feel distressed either as a result of taking part, or in the future, the following resources may be of assistance. .....

- Your local GP
- Corporate occupational health service provided by your organisation
- Support from MIND services https://www.mind.org.uk/information-support/helplines/

Appendix E

Expression of Interest Form

Project: An exploration of the perceptions and effects of using humour in health and safety communication

I have read and understood the information on (the flyer / participant Information sheet). I am interested in taking part in this project.

Please return this form in the envelope provided or contact the researcher by email or phone, as below, if you would like to discuss the research and ask any questions you may have about the study.

Researcher*:* Stephen Taylor

Email: s.taylor20@lancaster.ac.uk

Phone: 07305 623265

Please indicate your preferred contact:

Name:

Email:

Phone:

Appendix F

Consent Form

Study Title: *An exploration of the perceptions and effects of using humour in health and safety communication*

We are asking if you would like to take part in a research project. The purpose of this study is to explore how the use of humour is perceived in health and safety communication by those involved, and to understand the potential effects of using humour in such situations.

Before you consent to participating in the study, we ask that you read the participant information sheet and mark each box below with your initials if you agree. If you have any questions or queries before signing the consent form please speak to the principal investigator, Stephen Taylor.

Please initial box after each statement

1	I confirm that I have read the information sheet and fully understand what is expected of me within this study.	
2	I confirm that I have had the opportunity to ask any questions and to have them answered.	
3	I understand that my interview will be audio recorded and then made into an anonymised written transcript.	
4	I understand that audio recordings will be kept until the research project has been examined and published.	
5	I understand that my participation is voluntary and that I am free to withdraw at any time before, during interview or up to 2 weeks after the interview, without giving any reason.	
6	I understand that once my data have been anonymised and incorporated into themes it might not be possible for it to be withdrawn, though every attempt will be made to extract my data, up to the point of publication.	
7	I understand that the information from my interview will be pooled with other participants' responses, anonymised and may be published.	
8	I consent to information and quotations from my interview being used in reports, conferences and training events.	
9	I understand that the researcher will discuss data with their supervisor as needed.	
10	I understand that any information I give will remain confidential and anonymous unless it is thought that there is a risk of harm to myself or others, in which case the principal investigator may need to share this information with their research supervisor.	

11	I consent to Lancaster University keeping anonymised transcriptions of the interview for a minimum of 10 years after the study has finished.	
12	I consent to take part in the above study.	

Name of Participant___________________ Signature_____________________ Date _______

Name of Researcher ___________________Signature _____________________Date _______

Appendix G

Interview Guide

Study Title: ***An exploration of the perceptions and effects of using humour in health and safety communication***

There follows a series of questions and possible prompts for the semi-structured interviews:

Basic demographic questions will be asked: Age, gender, tenure and contact details.

Health and Safety Practitioners

1. What role do you think humour has in health and safety communication?

    1a. Could you provide some examples of when you have used humour?
    1b. If you think it doesn't have a role, could you describe why?

2. How do you think the use of humour in health and safety communication is / would be perceived by your recipient / audience?

3. What effects do you think using humour in health and safety communication has on the recipient / audience?

    3a. Could you provide any examples of how this might have presented itself?

4. How is the use of humour perceived in your industry?

Recipients who communicate with Health and Safety Practitioners

1. What role do you think humour has in health and safety communication?

    1a. Could you provide some examples of when it was used?
    1b. If you think it doesn't have a role, could you describe why?

2. What do you think if a health and safety practitioner uses humour when communicating health and safety information?

    2a. Could you provide some examples of when humour was used?

3. How do you think the use of humour in health and safety communication affects you and your behaviour?

    3a. Would you be able to recall any examples of this?

4. How is the use of humour perceived in your industry?

Appendix H

Debrief Sheet

An exploration of the perceptions and effects of using humour in health and safety communication

Note: This debrief will take place either face-to-face or via Teams/zoom/skype at the end of the interview

Thank you for taking part in the interview, your participation is much appreciated.

Questions?

How do you feel?

How did you find the interview?

What is the study about?

As a reminder, the purpose of this study is to explore how the use of humour is perceived in health and safety communication by those involved, and to understand the potential effects of using humour in such situations. To understand this, interviews will be conducted with health and safety practitioners, and the workers from their organisation they communicate with on a regular basis.

How will the interview data be used?

The information you provided is confidential. The data collected for this study will be stored securely and only the researcher conducting this study will have access to this data:

- Audio recordings will be stored on a secure encrypted device and once the project has been examined and submitted for publication they will be deleted.
- The files on the laptop computer and OneDrive cloud storage will be encrypted (that is no-one other than the researcher will be able to access them) and the computer itself password protected. Then archived for 10 years.
- The typed version of your interview will be made anonymous by removing any identifying information including your name. Anonymised direct quotations from your interview may be used in the reports or publications from the study, so your name will not be attached to them.
- All your personal data will be confidential and will be kept separately from your interview responses.

What will happen to the results?

The results will be summarised and reported in a doctoral thesis and may be submitted for publication in an academic or professional journal. Results may also be presented at conferences.
In addition, on completion of the thesis, a summary of the results will be sent via email to all participants.

Resources in the event of distress

Should you feel distressed either as a result of taking part, or in the future, the following resources may be of assistance.

- Your local GP
- Corporate occupational health service provided by your organisation
- Support from MIND services https://www.mind.org.uk/information-support/helplines/

Follow up contacts regarding information about the study?

If you have any questions about the study, please contact the main researcher:

Stephen Taylor
s.taylor20@lancaster.ac.uk

Supervisors

Dr. Claire Hardy
c.hardy1@lancaster.ac.uk
01524 593321

Dr. Jane Simpson
j.simpson2@lancaster.ac.uk
01524 592858

Details of expenses and prize draw

If you have incurred any expenses by taking part in this interview, they will be reimbursed at the end of the interview (up to £10) or as soon as practicable with video interviews. As stated at the beginning of the interview you were offered the opportunity to entered in a prize draw for a £50 Amazon voucher. You will be entered even if you chose not to complete the interview. The winner will be notified by a mutually agreed means of communication.

Appendix I

Ethical approval letter

Applicant: Stephen Taylor
Supervisor: Claire Hardy and Jane Simpson
Department: Health Research
FHMREC Reference: FHMREC19020

13 November 2019

Dear Stephen

Re: An exploration of the perceptions and effects of using humour in health and safety communication

Thank you for submitting your research ethics application for the above project for review by the **Faculty of Health and Medicine Research Ethics Committee (FHMREC)**. The application was recommended for approval by FHMREC, and on behalf of the Chair of the Committee, I can confirm that approval has been granted for this research project.

As principal investigator your responsibilities include:

- ensuring that (where applicable) all the necessary legal and regulatory requirements in order to conduct the research are met, and the necessary licenses and approvals have been obtained;
- reporting any ethics-related issues that occur during the course of the research or arising from the research to the Research Ethics Officer at the email address below (e.g. unforeseen ethical issues, complaints about the conduct of the research, adverse reactions such as extreme distress);
- submitting details of proposed substantive amendments to the protocol to the Research Ethics Officer for approval.

Please contact me if you have any queries or require further information.

Tel:- 01542 593987
Email:- fhmresearchsupport@lancaster.ac.uk

Yours sincerely,

R.E. Case

Becky Case
Research Ethics Officer, Secretary to FHMREC.

Appendix J

Ethical Amendment FHMREC 19095

Granted for use of the LinkedIn Platform for recruitment

Applicant: Stephen Taylor
Supervisor: Claire Hardy and Jane Simpson
Department: Health Research
FHMREC Reference: FHMREC19095

13 May 2020

Dear Stephen

Re: An exploration of the perceptions and effects of using humour in health and safety communication

Thank you for submitting your research ethics amendment application for the above project for review by the **Faculty of Health and Medicine Research Ethics Committee (FHMREC)**. The application was recommended for approval by FHMREC, and on behalf of the Chair of the Committee, I can confirm that approval has been granted for the amendment to this research project.

As principal investigator your responsibilities include:

- ensuring that (where applicable) all the necessary legal and regulatory requirements in order to conduct the research are met, and the necessary licenses and approvals have been obtained;
- reporting any ethics-related issues that occur during the course of the research or arising from the research to the Research Ethics Officer at the email address below (e.g. unforeseen ethical issues, complaints about the conduct of the research, adverse reactions such as extreme distress);
- submitting details of proposed substantive amendments to the protocol to the Research Ethics Officer for approval.

Please contact me if you have any queries or require further information.

Tel:- 01542 593987
Email:- fhmresearchsupport@lancaster.ac.uk

Yours sincerely,

R.E. Case

Becky Case
Research Ethics Officer, Secretary to FHMREC.

Appendix K

Ethical Amendment FHMREC 20092

Granted for access to a university for recruitment purposes

Lancaster University

Applicant: Stephen Taylor
Supervisor: Dr Claire Hardy
Department: Division of Health Research
FHMREC Reference: FHMREC20092 (amendment to FHMREC19020, 19095)

08 February 2021

Re: FHMREC20092 (amendment to FHMREC19020, 19095)
An exploration of the perceptions and effects of using humour in health and safety communication

Dear Stephen,

Thank you for submitting your research ethics amendment application for the above project for review by the **Faculty of Health and Medicine Research Ethics Committee (FHMREC)**. The application was recommended for approval by FHMREC, and on behalf of the Chair of the Committee, I can confirm that approval has been granted for the amendment to this research project.

As principal investigator your responsibilities include:

- ensuring that (where applicable) all the necessary legal and regulatory requirements in order to conduct the research are met, and the necessary licenses and approvals have been obtained;
- reporting any ethics-related issues that occur during the course of the research or arising from the research to the Research Ethics Officer at the email address below (e.g. unforeseen ethical issues, complaints about the conduct of the research, adverse reactions such as extreme distress);
- submitting details of proposed substantive amendments to the protocol to the Research Ethics Officer for approval.

Please contact me if you have any queries or require further information.

Email: fhmresearchsupport@lancaster.ac.uk

Yours sincerely,

Annie Beauchamp,
Research Ethics Officer, Secretary to FHMREC.

Appendix L

Ethical Amendment FHM-2021-069

[External] FHM-2021-0649-AmendPaper-1 Ethics approval of amendment

D

donotreply@infonetica.net

To Taylor, Stephen (taylor59) (Postgrad Researcher)

Cc Hardy, Claire

17/01/2022

This email originated outside the University. Check before clicking links or attachments.

FHM-2021-0649-AmendPaper-1 An exploration of the perceptions and effects of using humour in health and safety communication

Dear Stephen Taylor,

Thank you for submitting your ethics amendment application in REAMS, Lancaster University's online ethics review system for research. The amendments have been approved by the FHM REC.

Yours sincerely,

Faculty Research Ethics Officer on behalf of FHM

Lancaster University

Appendix M

Table M1

Theme, description and associated codes summary

Theme	Description	Assigned codes
The humorous robot- using humour to 'humanise' the formulaic nature of the role	Describes how humour was used by health and safety practitioners to assist with the delivery of the somewhat dry and formulaic (i.e. robotic) content of health and safety communication	Light-hearted approach Engaging people with humour Relationship building Breaking down barriers Being human H&S is a dry subject
Awkward bedfellows – humour's challenging relationship with health and safety	Describes how participants debated the reasoning for using humour in health and safety communication, suggesting possible reasons for both humour's inclusion and exclusion	Balance in using humour Personality and humour's use Serious not serious No place for humour H&S practitioners are officious Not taken seriously Changing perceptions
Reading the room – the situational predictors of humour	Describes three situational elements (audience, subject matter and location) that	Considering the audience Industry dependent humour Presuming humour is ok

Theme	Description	Assigned codes
	practitioners considered before humour was used in health and safety communication	Subject not humour compatible Cultural acceptance Risky humour Training humour Real experiences Non-scripted humour Our failures are funny Topic confidence
More than a laugh – the enduring effects of humour	Describes participant reflections on the long–term effects of using humour in health and safety communication	Compliance through humour Retaining information Humour to transfer information People talk to you more Increased interest