

**The Context of Voice:
How Group, Organisational and
Digital Contexts Shape Employee
Voice**

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for the degree of Doctor of Philosophy*

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- I led the theorisation, design, data analysis, and drafting of the manuscript. My co-authors contributed to the data analysis. My supervisors provided intellectual guidance and editorial feedback throughout the process.

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Editorial assistance

In accordance with the University of Sydney's Thesis and Examination of Higher Degrees by Research Procedures, editorial assistance was discussed and approved by my lead supervisor prior to engagement. A copy of the University's editing guidelines was provided to the editor, and all work was conducted in line with the Australian Standards for Editing Practice (2013).

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(<https://rightwithrhonda.com.au/services/>) in June 2025. The editing covered the Introduction (Chapter 1) and Conclusion (Chapter 5) of this thesis. Services included corrections to Australian spelling, punctuation, grammar, and minor formatting issues, as well as suggestions to improve clarity, consistency, and academic tone appropriate to PhD-level writing. The editing was performed using Microsoft Word's track changes and comments features.

While the editor does not share a specific academic background in the field of this thesis, she has extensive experience editing PhD theses across a wide range of disciplines, including business, international relations, education, engineering, and public health.

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Abstract

Employee voice plays a critical role in enabling individuals to contribute to organisational improvement. To date, research on employee voice has largely centred on one-on-one (dyadic) interactions between an employee and another person, often their manager. This thesis adopts a broader perspective on employee voice as a contextually embedded, multilevel phenomenon shaped not only by the individual who speaks up, but also by a range of other social actors and contextual factors such as group and organisational dynamics, and digital affordances (i.e., perceived utilities of digital tools). To advance a more contextually integrated understanding of how voice is enacted and shaped by group, organisational and digital contexts, I conducted three empirical studies.

Study 1 examined the social context of voice through the lens of role theory (Biddle, 1968). Through a narrative literature review of 268 articles (370 studies) on employee voice, I found a richer diversity of social actor roles beyond the role of the voicer. I identified six key social actors that have been examined and theorised about in the employee voice literature: voicers, voice endorsers, voice solicitors, voice implementers, voice allies and voice bystanders. These social actors play an important role in shaping the voice process beyond the voicer–manager dyad: voice allies may revive rejected ideas, voice endorsers may boost their visibility and voice bystanders may passively suppress voice through inaction. Managers were most frequently examined in their roles as voice endorsers, voice implementers and voice solicitors, reflecting their positional authority and control over resources. Moreover, although most studies focused on voicers at the individual and team levels, my findings highlight a broader system of interdependent actors whose interactions influence whether, how and when voice is heard, endorsed or implemented. More research is needed to examine the nature of these distinct voice roles and how individuals transition

between them. This will deepen our understanding of the socially embedded nature of voice and shed light on how ideas are sustained or lost as they move through voice pathways.

One of the key insights from Study 1 was that voice often occurs in shared, social contexts, such as within work groups and teams. Study 2 investigated in more depth the influence of the group context on whether issues are raised or voiced, measuring both promotive (i.e., expressing suggestions for improvement and ideas aimed at enhancing organisational functioning) and prohibitive voice of a group member (i.e., speaking up to highlight risks, problems, or harmful practices that may negatively affect the organisation) using an experimental vignette study. Specifically, I experimentally investigated the influence of (1) information redundancy – the extent other group members are also aware of the issues and (2) group diversity – the extent group members differ in demographics and function. Based on Parker et al.'s (2010) proactive motivational states framework, I tested two pathways by which information redundancy can influence voice. The first pathway is through group members' diffusion of responsibility as a lack of 'reason to' voice pathway, based on theorisation that if others also know about the same issues, there is a reduced sense of individual responsibility to voice. The second pathway is through voice self-efficacy as a 'can do' pathway through which information redundancy may influence group members' sense of confidence to voice about the issues that are known. Building on previous research, I found that information redundancy had significant indirect effects on both promotive and prohibitive voice via diffusion of responsibility, but I did not find significant indirect effects via voice self-efficacy. However, there was a significant moderated mediation such that group diversity moderated the influence of information redundancy on promotive and prohibitive voice via voice self-efficacy. Specifically, there was a criss-cross interaction effect, such that in teams with high group diversity, information redundancy reduced voice self-efficacy, whereas in teams with low group diversity (i.e., when members are more similar to each

other), information redundancy increased voice self-efficacy, and voice self-efficacy in turn increased both promotive and prohibitive voice. This suggests that the effects of information redundancy on voice self-efficacy depends on group diversity, such that members feel more confident to voice when there is shared knowledge about issues and when they are in a group environment where there is greater similarity between members.

Building on the findings of Study 2, which highlighted how voice is influenced by shared group contexts, such as the extent individuals working in teams are aware of common issues, and are similar to or dissimilar from each other, Study 3 shifted to an even higher level of shared context that has attracted scant empirical attention to date, that is, voice at the organisational level expressed online. Based on affordance perspectives (i.e., perceived utilities for action provided by an object) (Khan et al., 2023) and organisational social capital theory (Leana & van Buren, 1999), in the third empirical study, I examined e-voice at the organisational level, which refers to the collective expression of employee voice using electronic communication tools to contribute ideas and feedback and participate in decision-making within the organisation. Using machine learning techniques, I analysed 347,305 e-voice posts with ‘Advice to Management’ shared on the online employer review platform Glassdoor by employees from 301 publicly traded U.S.-based firms between 2015 and 2019. I conducted an organisational-level time-lagged analysis of e-voice, analysing three key dimensions of e-voice: its quantity, scaled proportionally for each firm based on the number of current employees using publicly available data on the organisation’s workforce; sentiment, capturing the overall emotional tone of employee opinions, emotions and attitudes in terms of its valence or polarity through sentiment analysis techniques; and content heterogeneity, measured by the variety and diversity of issues, concerns and feedback expressed by employees using topic modelling and distribution analysis. I then linked the e-voice data to objective organisational performance data obtained from the COMPUSTAT

database, which provides financial data on publicly traded firms. I found that at the organisational level, a higher quantity of employee e-voice was significantly associated with stronger financial performance, particularly when the content was positive (i.e., e-voice sentiment). Moreover, this relationship was mediated by employees' positive word of mouth about their organisation.

Together, the findings across the three empirical studies highlight that voice is not solely an individual act but one embedded within a complex context encompassing social, group, organisational and digital factors. This thesis contributes to knowledge on voice as a phenomenon shaped by numerous social actors occupying complementary roles, by group-level informational and diversity dynamics that influence motivational states, and by the structural affordances of digital platforms that facilitate or constrain organisational-level e-voice expressions with organisational impacts. In this way, this thesis offers new theoretical integrations and methodological approaches to studying voice as a multistakeholder, multilevel process, with important practical implications for cultivating voice-enabling environments across physical and digital contexts.

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Chapter 1: Introduction

1 Research motivation

“Sorry, I don’t have time”, “I can’t”, “maybe next time...”

Growing up with parents deeply involved in community work, I was always surrounded by examples of collective actions and organisations investing in social good. However, these were often the responses I received when I was a volunteer for a community-focused non-profit organisation several years ago during my student exchange in London. My attempts to voice a suggestion, idea or opinion to improve the organisation’s culture and operations were frequently dismissed or met with vague, unfulfilled promises. I could sense voices going unheard, ideas lost in the noise of organisational inertia. The London-based organisation, which aimed to help individuals build meaningful relationships and social support within the city’s transient and diverse population, was no exception. Many volunteers joined with hopes of building community, being heard and making a meaningful contribution. Yet, many of them left disillusioned when their voices were ignored or undervalued. Despite the challenges, I remained committed to my role. I held onto the belief that change was possible, even when others gave up. As frontline volunteers, we shared a deep understanding of the everyday struggles and frustrations, and many – like me – spoke up to challenge and change the status quo. Occasionally, there were times when my ideas were not only heard but also implemented, particularly when supported by team members who shared the same vision.

These rare but powerful experiences gave me a glimpse into the importance of the broader context, and what was possible beyond the lone ranger, the voicer. Unintentionally, this experience became the foundation for my doctoral research. It shaped my curiosity about when, how and why employee voice is recognised within organisational contexts. I hope that

this thesis contributes, in some small way, to inspiring organisations to better value employee voice, and to foster broader social, group, organisational and digital environments that support and enable the transformation of voiced ideas into meaningful, effective change.

2 Research aims and rationale

Employee voice is broadly defined as “all of the ways and means through which employees attempt to have a say about, and influence, their work and the functioning of their organization” (Wilkinson et al., 2020, p. 1). This thesis adopts this definition of employee voice as it acknowledges the diverse forms, contexts and channels through which employees can express themselves and influence both their work and broader organisational effectiveness.

The main aim of my thesis is to contribute and extend knowledge on employee voice as a contextually embedded phenomenon – one that unfolds as a process within and is shaped by social, group, organisational and digital contexts. This perspective builds on emerging perspectives on employee voice (Khan et al., 2025; Nieberle & Fladerer, 2025; Satterstrom et al., 2021) that highlights the multifaceted nature of employee interactions and the varied contextual influences that shape how voice is expressed and received in contemporary workplaces. Traditional research on voice behaviour typically situates it within hierarchical workplace settings, where physical proximity, job roles and power dynamics actively shape in-person interactions and influence how voice is expressed and received (Morrison, 2014; Wilkinson et al., 2020). Since managers typically hold greater authority and decision-making power, most studies have concentrated on upward voice, or how employees speak to their superiors, rather than on how they speak outward across different levels or contexts (Morrison, 2011). Much of this work views voice through the lens of employees’ positions

within organisational hierarchies and focuses on dyadic relationships between employees and their managers (Biddle, 1986; Morrison, 2014; Paterson & Huang, 2019). In this thesis, the term ‘voicer’ refers to individuals engaging in voice behaviour within dyadic relationships, such as with a direct manager or supervisor. Group/team members are also considered voicers, specifically in the context of intra-team interactions, where voice is directed toward peers and/or leaders. It is important to distinguish this from group/team voice, which refers to the collective expression of voice by team members as a unified entity. Next, I provide a literature review on employee voice, focusing on the organisational behaviour discipline. This review follows with identified gaps in voice research, research questions I seek to answer, my philosophical approach and this thesis’s contributions.

3 Literature review

3.1 Employee voice in different disciplines

Employee voice has been widely studied across various disciplines within management and social sciences, including organisational behaviour (OB), human resource management (HRM), industrial relations (IR), economics and law. Each field has developed distinct conceptual frameworks for analysing voice (Pohler et al., 2020). This foundational concept of voice, originally defined by Hirschman (1970, p. 30) as “any attempt at all to change, rather than to escape from, an objectionable state of affairs” has enabled scholars across disciplines to converge on the idea of voice as a means for employees to express dissatisfaction, often in relation to organisational injustice (Harlos, 2001).

Over time, however, voice research has evolved into discipline-specific silos, with each field adopting its own theoretical perspectives, often to the exclusion of cross-disciplinary insights (Wilkinson et al., 2020). This fragmentation has led to recent efforts to

reconcile divergent conceptualisations, particularly among OB, HRM and IR scholars (Mowbray et al., 2015). Table 1.1 illustrates the ongoing dialogue and interdisciplinary challenges in conceptualising voice.

Table 1.1: Comparison of conceptualisations of voice in OB, HRM and IR disciplines

	Organisational behaviour	Human resource management	Industrial relations
Primary level of analysis	Individual (micro)	Individual/collective (meso)	Collective (macro)
Primary focus of analysis	Voice as behaviour (individual, team)	Voice systems and structures (direct and indirect mechanisms)	Voice systems and structures (indirect employee representation)
Voice content	Suggestions, constructive ideas, feedback, expression of concerns	Task-based participation, upward problem-solving, complaints about fair treatment	Worker interests, collective bargaining, grievance procedures, speak-up schemes, arbitration
Primary intentions of voice (assumed)	Constructive, organisation-oriented, pro-social	Participation in decision-making, self-focused, corrective, dissatisfaction	Participation in decision-making, self-focused, corrective, dissatisfaction
Voice communication	Informal, direct communication (e.g., in-person conversations, email, word of mouth)	Informal/formal mechanisms (e.g., enterprise social media, employee surveys)	Formal, indirect mechanisms (e.g., unions, work councils, ombudsman)
Types of employees	All within organisational hierarchy (e.g., individual subordinates, managers, high-level managers)	All within organisational hierarchy (e.g., individual subordinates, managers, high-level managers)	Workers in unions and non-unionised organisations
Alternatives to voice	Silence	Silence	Exit
Enablers and inhibitors examined	Individual-level behaviour, micro-level contextual	Individual-level behaviour, micro-level contextual, structural	Structural

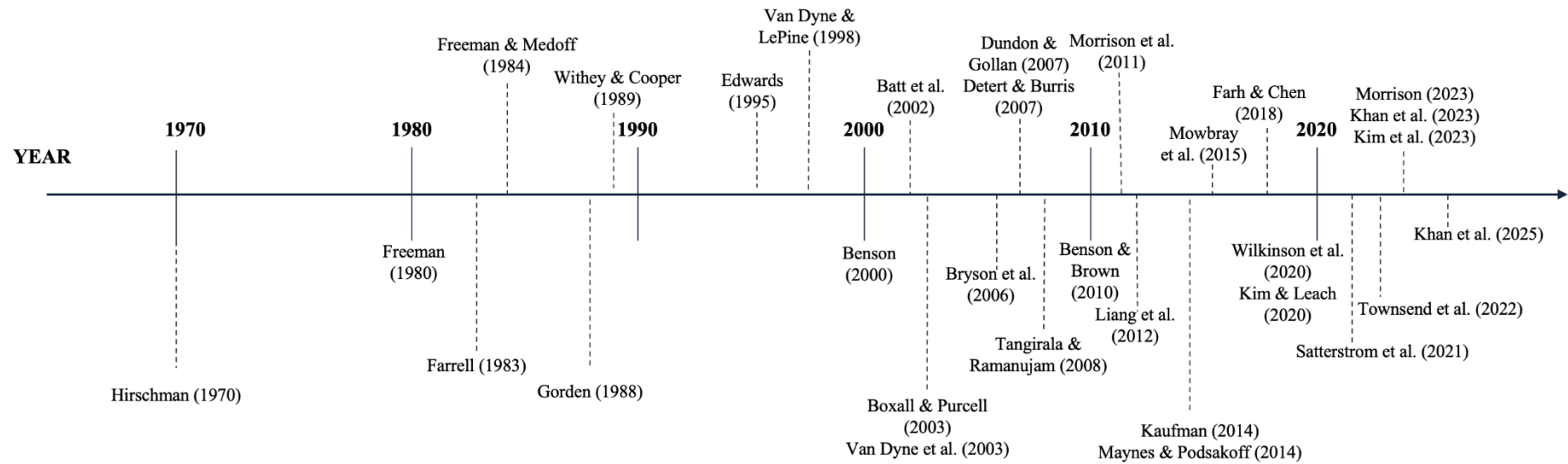
3.2 Historical overview

Voice research has undergone substantial evolution and continues to broaden in scope, as illustrated by the timeline of the historical development of key voice frameworks and approaches (see Figure 1.1). Hirschman's (1970) seminal model of Voice, Exit and Loyalty conceptualised voice as a way by which consumers could express dissatisfaction in an attempt to elicit change. Farrell (1983) subsequently adapted this model to the workplace context through the Exit–Voice–Loyalty–Neglect (EVLN) typology, marking a shift from customer to employee experience. Gorden (1988) further advanced the field by proposing multiple dimensions of voice, enabling more granular analysis of employee expression. Initially, voice was conceptualised primarily as a mechanism serving the interests of individual voicers (Farrell, 1983; Gorden, 1988; Hirschman, 1970). Over time, however, voice became conceptualised as upward communication as a one-time dyadic communication between an employee and their manager (Morrison, 2011). The scope has expanded to consider the organisation and unit as a key beneficiary of voice (Liang et al., 2012; Maynes & Podsakoff, 2014; Van Dyne & LePine, 1998). This shift reflects increasing recognition of voice as a multifaceted, multilevel construct with implications not only for individual expression but also for organisational learning, performance and adaptability.

More recently, alternative conceptual frameworks have been developed including Townsend et al.'s (2022) voice pathways model, which engages internal (e.g., relationships between managers and employees, internal organisational policies) and external pathways (e.g., agencies), Satterstrom et al.'s (2021) voice cultivation pathways, and Nieberle and Fladerer's (2025) voice echoes, with consequences of voice behaviour as a process for the voicer and their voice targets. These frameworks conceptualise voice differently but consider the temporal element of voice. For instance, Satterstrom et al. (2021, p. 380) define voice as

“a collective, interactional process rather than a one-time dyadic event”. Similarly, Townsend et al. (2022, p. 283) describe voice as “a journey en route to enhanced (or diminished) employee voice with a start, diversion, delay, and combining twists and turns during processes leading to outcomes”. Shifting away from the action of voicing, voice conceptual frameworks increasingly consider the actors within the phenomenon, including voicers and target receivers (e.g., managers, coworkers) (Nieberle & Fladerer, 2025; Pfrombeck et al., 2022).

Figure 1.1: Historical development of key voice frameworks and approaches



3.3 Voice as constructive behaviour

Building on the foundational developments outlined in the historical overview, the organisational behaviour (OB) discipline has focused on the constructive nature of employee voice. In OB research, voice is commonly defined as a “promotive behavior that emphasizes expression of constructive challenge intended to improve rather than merely criticize” (Van Dyne & LePine, 1998, p. 109). This foundational definition has shaped how voice is conceptualised in the OB field. It is assumed to be discretionary and proactive, challenges the status quo, and aimed at improving collective outcomes, rather than serving individual interests (Crant, 2000; Detert & Burris, 2007; Morrison, 2011). Voice is typically informal and direct, involving interpersonal communication where employees regularly offer constructive suggestions (Klaas et al., 2012; Marchington, 2008; O’Shea & Murphy, 2020). Ideas and feedback are often communicated in-person, in email exchanges, or in online chat messages between individuals, teams, and management (Klaas et al., 2012; O’Shea & Murphy, 2020).

3.4 Voice types and content

Over time, scholars have built on Van Dyne and LePine’s (1998) approach to investigate different types and content of voice including Liang et al.’s (2012) promotive and prohibitive voice types, Maynes and Podsakoff’s (2014) supportive, constructive, defensive and destructive voice types, Burris’s (2012) challenging and supportive voice types, and Van Dyne et al.’s (2003) acquiescent, defensive and prosocial voice types.

Specifically, Liang and colleagues (2012) distinguished between two forms of constructive voice. Promotive voice refers to the expression of suggestions or new ideas aimed at improving the functioning of a work unit or organisation (Liang et al., 2012). This form of voice is characterised by its future orientation and is often driven by prosocial

motivation, that is, actions undertaken with the intention of benefiting others or the organisation as a whole (Burriss et al., 2013; Kwon & Farndale, 2020). In contrast, prohibitive voice involves raising concerns about past or existing practices, incidents or behaviours that may be harmful to the organisation (Liang et al., 2012). While both forms are considered proactive, prohibitive voice tends to be more risk-laden, as it often involves criticism or opposition. There has been a notable shift to examining these voice types, where several studies (Burriss et al., 2022; Chen & Treviño, 2022; Lam et al., 2022; Liao et al., 2021) have examined the differential managerial and coworker reactions to each voice type. There are studies that have examined targets' responses including idea support and endorsement to both voice types (Bain et al., 2021). This is a crucial next step for progressing ideas toward implementation. Moreover, Chamberlin and colleagues' (2017) meta-analysis on promotive and prohibitive voice revealed that although promotive voice is positively related to job performance, the opposite occurs for prohibitive voice.

Expanding from the traditional conceptualisation of voice as 'challenging', Burriss (2012) introduced challenging and supportive voice types. Burriss posited that voice can be supportive of the status quo, intended to stabilise and preserve current organisational practices or policies. For instance, supportive voice could be offered through consistent involvement in decision-making, for instance. Studies tend to examine supportive voice types in comparison to challenging voice (Duan, Wang et al., 2022; Newton et al., 2022). In particular, there have been studies (Duan, Wang et al., 2022; Wu et al., 2022) focused on how newcomers (i.e., new employees) engage in supportive voice types. Wu et al. (2022) found that newcomers' constructive and supportive voice influenced supervisors' perceptions of newcomers' desire to master work-related competencies and desire for interpersonal closeness, respectively. These studies are insightful for examining how new employees use

voice behaviour to facilitate their socialisation into organisations and create early impressions on their coworkers and supervisors (Choi et al., 2015).

Maynes and Podsakoff (2014) further conceptualised and introduced a two-dimensional typology combining the ‘challenge vs. preservation’ motive and the ‘promotive vs. prohibitive’ direction. Supportive voice refers to endorsing existing policies or programs and defending them from unjust criticism, aligning with the preservation motive.

Constructive voice, by contrast, reflects the challenge motive and entails proposing ideas intended to improve organisational functioning. In this typology, defensive voice is defined as resistance to change – an attempt to maintain the status quo, even when change may be beneficial. Destructive voice, the negative counterpart to constructive voice, consists of hostile or unproductive critiques of work practices or policies. Importantly, this framework broadens the lens through which voice is understood, capturing not only its intention but also its tone and direction. Maynes and Podsakoff’s (2014) conceptualisation of promotive and prohibitive voice differs from that of Liang et al. (2012), who view both forms as inherently constructive. Their conceptualisation of constructive voice aligns with Burrell’s (2012) conceptualisation of supportive voice. Newton et al.’s (2022) found that team members’ challenging, and supportive voice influenced how individuals across an organisation self-assembled into temporary work teams.

Van Dyne and colleagues (2003) categorised voice behaviours based on underlying motives: acquiescent, defensive and prosocial. Acquiescent voice emerges from feelings of resignation or helplessness, where employees speak up passively or because they feel they must, rather than out of a desire to improve. Defensive voice, in this context, is focused on self-protection, with employees withholding or shaping their voice to avoid negative repercussions. Prosocial voice, however, reflects a motivation to benefit others, and aligns closely with promotive voice in its constructive, future-focused orientation. These

frameworks differ not only in their conceptual distinctions but also in how they interpret voice motives and risks. Notably, Maynes and Podsakoff's (2014) definition of defensive voice emphasises the motivation to resist change, while Van Dyne and colleagues view defensive voice more as a protective mechanism to avoid personal threat. This distinction has important implications for interpreting voice behaviour, particularly in studies examining risk, power dynamics, or fear of reprisal.

Together, these typologies demonstrate that voice is not a uniform construct, but rather a multidimensional phenomenon shaped by motivational intent, content, direction and relational context. Furthermore, in consideration of managers as target recipients of various voice types, Burris et al. (2017) examined the influence of voice content by the importance of the issue being addressed, the resources required to enact change, and the interdependencies involved in enacting change. This is important for managers who often consider the practical aspects of voice, especially as they are assumed to have authority to enact change.

Table 1.2 summarises the voice types actively investigated in the OB discipline.

Table 1.2: Summary of voice types actively investigated in the organisational behaviour discipline

Main reference	Voice types	Concepts
Burriss (2012)	Challenging voice	Speaking up to alter, modify, or destabilise generally accepted policies and practices, directed to individuals who have created or oversee maintaining the status quo.
	Supportive voice	Speaking up with intention to preserve or stabilise current organisational policies and practices.
Dundon et al. (2004)	Individual voice	Individual articulation of specific issues with management.
	Collective voice	Collective expression of voice that offers an opposing source of power to management.
Liang et al. (2012)	Promotive voice	Prosocial voice by employees, offering new ideas for improving overall functioning of work unit or organisation.
	Prohibitive voice	Employees' expression of concern about work practices or behaviour that is harmful to the organisation.
Maynes & Podsakoff (2014)	Supportive voice	Voluntary expression that supports worthwhile policies, programs, and more, and protects these when unfairly criticised.
	Constructive voice	Voluntary expression of ideas, opinions and more, for effecting organisationally functional change.
	Defensive voice	Voluntary expression as opposition to changing organisation's policies, programs and more, even when changes have merit or are necessary.
	Destructive voice	Voluntary expression of opinions about work policies, practices and more, that is hurtful and critical.
Van Dyne et al. (2003)	Acquiescent voice	Intentionally expressed based on resignation, feelings of resignation, less able to make much difference, less proactive.
	Defensive voice	Intentionally expressed for self-protection purposes, based on fear, feeling afraid and personally at risk.
	Prosocial voice	Intentionally expressed based on cooperation, with altruistic, other-oriented, motives.

3.5 Key theories

The phenomenon of voice as a proactive form of communication is closely linked to constructs such as reciprocity, perception, signalling and learning. Key theories that reflect these constructs include social exchange theory, social information processing theory, social learning theory and psychological safety.

3.5.1 Social exchange theory

Given that voice is an informal and discretionary behaviour, social exchange theory is frequently used to explain its dynamics (e.g., Liu et al., 2013; Van Dyne et al., 2008; Xu et al., 2023). Social exchange theory conceptualises social behaviour as “a series of interactions that generate obligations” (Cropanzano & Mitchell, 2005, p. 874), which, over time, give rise to relationships grounded in trust, mutual respect and commitment. These exchanges are typically interdependent and shaped by implicit expectations of reciprocity, rather than formal contractual agreements (Blau, 2017). As individuals evaluate the perceived costs and benefits of these interactions, the resulting relationships are sustained through continued, reciprocal exchanges. Within this framework, two key constructs of leader–member exchange (LMX) (Graen & Uhl-Bien, 1995) and team–member exchange (TMX) (Seers et al., 1995) represent the quality of exchange relationships with supervisors and peers, respectively, and offer a useful lens through which to understand the social conditions that facilitate or inhibit voice behaviour.

In dyadic contexts, voice is typically conceptualised as a bottom-up process in which employees at lower levels of the organisational hierarchy express concerns or suggestions to supervisors positioned above them. Within this framework, leaders develop differentiated relationships with subordinates based on mutual trust, respect and obligation, commonly referred to as leader–member exchange (LMX; Graen & Uhl-Bien, 1995). Meta-analytic evidence supports a strong positive association between LMX quality and voice behaviour

(Carnevale et al., 2017), suggesting that high-quality LMX relationships foster voice, as employees are more likely to reciprocate the trust and respect extended by their supervisors (Van Dyne et al., 2008). Extending this understanding, Xu et al. (2023) examined how voice influences LMX development. Their findings indicated that leaders, particularly those who value originality, form high-quality LMX relationships with employees who engage in constructive voice, driven more by emotional impressions than the source of information itself. While most research has supported a linear relationship between LMX and voice, Carnevale et al. (2020) found curvilinear effects in contexts where employees considered broader dynamics, such as their coworkers' voice behaviour and the degree to which leaders actively solicited input. LMX has also been examined in peer-driven team environments. For example, Hussain et al. (2019) demonstrated that peer-LMX, which indicates the quality of the relationships that peers have with their managers, enhanced the indirect relationship between information redundancy and individual voice via diffusion of responsibility, emphasising the influence of peer-level exchanges in shaping voice behaviour. Beyond dyadic exchanges with immediate supervisors, Liu et al. (2013) broadened the scope of LMX by examining multilevel leader relationships within organisational hierarchies. Their study investigated not only employee–supervisor and supervisor–skip-level leader (i.e., leaders one or two levels above in the organisational hierarchy) exchanges, but also direct exchanges between employees and skip-level leaders. This multilevel lens provides a more comprehensive understanding of how upward voice is embedded within a broader network of vertical social exchange relationships.

In team contexts, team-member exchange (TMX) refers to the quality of reciprocal relationships between an individual team member and their colleagues, encompassing the exchange of ideas, feedback, and assistance (Seers et al., 1995). Research on TMX has demonstrated that team members with high-quality TMX relationships tend to engage in

more citizenship behaviours, identify more with the group (Farmer et al., 2015; Kim et al., 2018), and have higher levels of job satisfaction and organisational commitment (Banks et al., 2014). TMX has also been shown to influence members' voice behaviour (Shih et al., 2017), as well as the broader team context in which voice occurs. For instance, Duan et al. (2019) found that TMX positively predicted voice climates, defined as shared team beliefs about the acceptability and encouragement of speaking up, suggesting that supportive peer exchanges shape perceptions of psychological safety and openness within teams.

Importantly, the relationship between TMX and voice climates appears to be reciprocal. Ohana and Stinglhamber (2019) demonstrated that voice-supportive climates can also reinforce TMX quality, highlighting the dynamic interplay between interpersonal exchanges and contextual perceptions. Moreover, TMX does not operate in isolation from LMX. Both forms of exchange jointly influence voice behaviour, as employees often weigh their relationships with both team members and supervisors when deciding whether and how to speak up. This interdependence reflects the multifaceted nature of workplace interactions, where team and leadership dynamics collectively shape the voice process.

3.5.2 Social learning theory

Social learning theory suggests that behaviour is acquired through observation and modelling in social environments, rather than solely through personal experience (Bandura, 1977). Individuals learn by observing role models who they perceive as trustworthy or admirable, particularly when these role models possess desirable traits or hold positions of authority. Leaders are often recognised as important role models since they are perceived to be credible and legitimate, and hold authority (Brown & Treviño, 2006). Hence, it is not surprising that scholars often use social learning theory to investigate the relationships between leader-related behaviour and their subordinates' voice behaviour. Scholars have examined leaders as voice role models (Paterson & Huang, 2019), as well as broader leader

characteristics such as leadership styles (Ali et al., 2020; Li & Sun, 2015) and direct interactions with their employees, including supervisory oversight (Farh & Chen, 2014) and expressions of curiosity (Thompson & Klotz, 2022).

Building on this line of inquiry, researchers have also explored the relationship between ethical leadership and both individual (Chen & Hou, 2016; Paterson & Huang, 2019) and team-level voice behaviour (Walumbwa et al., 2012). Ethical leadership is considered a process through which leaders' ethical conduct is transmitted to followers via mechanisms of social learning, social exchange and identity alignment (Chen & Hou, 2016). By upholding high ethical standards, ethical leaders foster a climate that encourages employees to voice concerns about unethical practices and to contribute constructive suggestions for improving unit effectiveness (Walumbwa & Schaubroeck, 2009). Empirical evidence from Son (2019) supports this role-modelling effect, showing that employees' perceptions of their supervisors' voice behaviour predicted their own voice behaviour and trust in their supervisors. Notably, the relationship between supervisor voice and employee voice was moderated by gender, indicating that the modelling effects of leadership voice may vary across employee subgroups.

3.5.3 Social information processing theory

Social information processing theory posits that employees' perceptions and subsequent behaviours are shaped by the social cues and informational signals present in their workplace environment consisting of coworkers (Chen et al., 2013) and managers who hold different levels of power (Hsiung & Tsai, 2017; Salancik & Pfeffer, 1978). A core assumption of social information processing theory is that individuals construct their understanding of reality by interpreting cues from their social surroundings, and in doing so, adjust their attitudes, cognitions and behaviours accordingly (Chen et al., 2013). Given their frequent and ongoing interactions with supervisors, employees often draw on behavioural cues from their

leaders to guide their own responses (Frazier & Bowler, 2015; Liang et al., 2023) and build trust (Ng & Feldman, 2013; Son et al., 2019). For instance, Ng and Feldman (2013) found that changes in employees' perceptions of their supervisors' embeddedness influenced parallel changes in their own embeddedness and organisational trust, which subsequently shaped their voice behaviour. Within group contexts, social information processing theory has been applied to explore how employees detect and interpret social norms, including voice climates (Frazier & Bowler, 2015; Frazier & Fainshmidt, 2012; Hsiung & Tsai, 2017) and service climates (Lam & Mayer, 2014). In such settings, team members observe the behaviours and attitudes of their peers, forming shared assumptions about the appropriateness of speaking up (Ng & Feldman, 2013). From a social information processing perspective, studies have found voice climates to influence performance at both group (Frazier & Bowler, 2015) and individual levels (Frazier & Fainshmidt, 2012).

3.5.4 Psychological safety

Given the interpersonal risks associated with speaking up, psychological safety, defined as “a shared belief that the team is safe for interpersonal risk-taking” (Edmondson & Lei, 2014, p. 23), plays a critical role in enabling voice behaviour. Employees who express concerns or challenge organisational norms often face potential repercussions such as reputational harm, strained workplace relationships or negative career consequences (Morrison, 2014). As such, employees may evaluate the relative risks associated with different voice types, choosing whether to engage in promotive or prohibitive voice accordingly. Drawing on data from a two-wave panel study of 239 Chinese retail employees, Liang et al. (2012) found that psychological safety had a stronger association with subsequent prohibitive voice, typically seen as riskier, than with promotive voice.

Perceptions of psychological safety are shaped by both individual characteristics (O'Donovan et al., 2021) and contextual factors, including the quality of supervisor–

subordinate and coworker relationships (Detert & Burris, 2007; Xu et al., 2019), group dynamics (Potipiroon & Ford, 2021), and broader organisational practices (Kahn, 1990). Leadership-related factors have also been shown to influence psychological safety. For example, both overarching leadership styles (Zhang et al., 2020) and discrete leader behaviours, such as expressions of curiosity (Thompson & Klotz, 2022) or the use of humour (Potipiroon & Ford, 2021), have been linked to higher perceptions of psychological safety and, in turn, increased voice behaviour. Detert and Burris (2007) similarly found that management openness, defined as employees' perception of their managers' receptivity to input, positively influenced psychological safety and encouraged improvement-oriented voice. While leaders play a central role in shaping employees' sense of safety due to their positional authority, emerging research also highlights the importance of coworkers and team members in fostering psychologically safe environments that support voice (Lee et al., 2023; Potipiroon & Ford, 2021).

Recent scholarship increasingly recognises psychological safety as a critical climate factor influencing voice behaviour (Edmondson & Besieux, 2021). For instance, Brykman and Maerz (2023) examined how leaders' responses to employee voice shaped team-level voice climates, defined as shared beliefs regarding the safety of speaking up and team members' voice self-efficacy, which subsequently influenced collective voice intentions. Their study also explored the moderating role of implicit voice theories, whereby some team members hold tacit beliefs that voice is inherently unsafe or inappropriate. They found that in teams where such beliefs were prevalent, members were more attuned to contextual cues that signalled potential consequences for speaking up. Expanding the focus beyond leadership, O'Donovan et al. (2021) conducted a thematic analysis of healthcare professionals' experiences and identified four interrelated influences on psychological safety and voice:

personal characteristics, prior experiences, perceived recognition and value by others and the perceived appropriateness of the issues raised.

Together, these studies emphasise that psychological safety and by extension, voice behaviour, is shaped by a complex interplay of multilevel and contextual factors, including leadership behaviours, interpersonal dynamics and individual perceptions.

3.6 Theories applied in this thesis

While foundational voice literature has predominantly drawn on theories such as social exchange, social learning theory, social information processing theory and psychological safety to explain why voicers speak up, this thesis extends the conversation by applying role theory, proactive motivational states theory, organisational social capital theory, and digital and social media affordances theory, which offer a complementary lens for understanding voice behaviour within social, group, organisational, and digital contexts.

3.6.1 Role theory

Role theory explains how individuals behave based on the expectations associated with their social roles, highlighting how these roles are shaped by interactions and context (Biddle, 1979). Role theory suggests that roles are patterned social behaviours and characteristics assumed by social actors (Dierdorff et al., 2012). These roles entail specific expectations for each social actor's behaviour as well as expectations of others. In employee voice research, role theory helps illuminate how individuals interpret and respond to the expectations tied to their formal and informal roles (Anglin et al., 2022), which can influence their willingness and perceived legitimacy to speak up. For instance, Tangirala et al. (2013, p. 1042) found that duty and achievement orientations, respectively, positively and negatively influenced to voice through their impact on voice role conceptualisation, or the "extent to which employees think of voice as part of their job role". Furthermore, role theory has been applied to examine specific voice types including improvement-oriented voice (Fast et al.,

2014), promotive voice and prohibitive voice (Kakkar et al., 2016). Notably, role theory has been applied to examine employee voice at different levels of the job hierarchy, whereby voice is expressed upward by both subordinate employees to their direct managers (e.g., Fast et al., 2014) and managers to upper management (e.g., Paterson & Huang, 2019).

3.6.2 Proactive motivational states theory

The concept of proactivity has shifted from viewing employees as passive responders to recognising their capacity for self-initiated, future-focused and change-oriented action (Crant, 2000; Frese & Fay, 2001; Grant & Ashford, 2008). In light of the growing consensus that proactivity is a “future-focused, change-oriented way of behaving, or a process” (Parker et al., 2010, p. 829), Parker et al. offered a goal-driven model of proactive motivation by identifying three proximal proactive motivational states – ‘can do’, ‘reason to’ and ‘energised to’ states – that underpin proactive goal generation and goal striving. Drawing on self-regulation (Bandura, 1991) and expectancy theories (Vroom, 1964), the ‘can do’ motivational state reflects individuals’ self-efficacy perceptions, low perceived costs of action and control appraisals, which influences their confidence in initiating voice. The ‘reason to’ motivational state, grounded in self-determination theory (Deci & Ryan, 2000), captures why employees engage in proactive behaviour, including intrinsic, integrated and identified motivation. This is especially relevant in discretionary or ambiguous contexts. The ‘energised to’ motivational state refers to affective states that stimulate proactive behaviour, broaden cognition and sustain effort.

3.6.3 Organisational social capital theory

Organisational social capital refers to the collective value embedded in the social relationships within an organisation, shaped by shared trust and a common orientation toward collective goals (Leana & van Buren, 1999). Unlike tangible assets such as human capital (skills and knowledge) or physical capital (infrastructure and equipment), social capital is an

intangible resource that cannot be bought or sold. It is built through ongoing investment in interpersonal relationships, with the expectation of mutual benefit (Lin, 2001). At the organisational level, social capital is jointly held by the organisation and its members, residing in the quality of interactions among individuals (Coleman, 1988). While early work by Baker (1990) emphasised the structural aspects of relationship networks, later theorists such as Bourdieu (1986) and Putnam (1995) expanded the concept to include the resources embedded within these networks, including trust and shared norms. Leana and van Buren (1999) further distinguish two core dimensions of organisational social capital: associability – the willingness and ability of employees to prioritise collective goals – and relational trust, which encompasses mutual respect, perceived trustworthiness, and a sense of obligation among organisational members.

3.6.4 Digital / social media affordances theory

The concept of affordance was introduced by Gibson (1979) to describe action possibilities within an environment. In the context of design and human–computer interaction, it refers to the features of an object suggest its potential use (Norman, 2013). In organisational research, affordances have since been understood as the possibilities for action that emerge through direct interaction with technology (Leonardi, 2011). With social media, affordances are defined as the “perceived actual or imagined properties of social media, emerging through the relation of technological, social, and contextual factors, that enable and constrain specific uses of the platforms” (Ronzhyn et al., 2022, p. 2178). Recently, Khan et al. (2023) identified five key social media affordances: visibility, association, persistence, anonymity, and editability. Anonymity is a social media affordance that enables users to conceal their identity when engaging with a platform (Fox & McEwan, 2017). Persistence is a social media affordance that allows e-voice content to remain accessible and retrievable after it is shared, thereby facilitating ongoing dialogue and enabling employees to revisit and

build upon previous contributions (Khan et al., 2023). Editability is a social media affordance that allows users to revise their e-voice content, providing more time for thoughtful responses compared to the immediacy required in face-to-face communication (Gode et al., 2020). Association is a type of affordance that allows users to connect with others and build social or professional relationships (Khan et al., 2023). Visibility is a social media affordance that enables users to shape their self-presentation and control the information they share, including content displayed on personal profiles (Treem & Leonardi, 2012).

3.7 Voice at different levels

In organisational behaviour literature, voice behaviour has been most extensively studied at the individual level, while group and organisational levels remain relatively underexplored.

3.7.1 Individual level

A substantial body of research has demonstrated that leader-related factors, such as leadership styles, personal characteristics and behavioural tendencies, play a significant role in shaping subordinate voice behaviour. A diverse range of leadership styles have been associated with voice, including ethical leadership (Avey et al., 2012; Babalola et al., 2019; Chen & Hou, 2016; Lee et al., 2017; Mo & Shi, 2018), servant leadership (Arain et al., 2019; Lapointe & Vandenberghe, 2018; Sun et al., 2019), authentic leadership (Hsiung, 2012), transformational leadership (Duan et al., 2017; Wang et al., 2012), and authoritarian leadership (Zheng et al., 2021). Beyond leadership styles, specific leader traits and behaviours have also been found to influence voice. These include leader humility (Bharanitharan et al., 2019), inclusiveness (Bienefeld & Grote, 2014), humour (Carnevale et al., 2022), narcissism (Carnevale et al., 2018), displays of curiosity (Thompson & Klotz, 2022) and proactive personality (Li & Tangirala, 2021; Li et al., 2022).

Leaders' affective states and moods have also been shown to impact voice behaviour (Liu et al., 2015; Liu et al., 2017), as have their psychological beliefs, such as managerial self-efficacy (Fast et al., 2014), felt obligation to the organisation (Ng & Feldman, 2015) and psychological contract perceptions (Ng et al., 2014). For example, Fast et al. (2014) found that managers with low self-efficacy were less likely to solicit voice, more likely to respond negatively to employees who spoke up and generally less inclined to implement voiced suggestions, thereby reducing employees' motivation to speak up.

Relational and contextual dynamics also shape voice behaviour. The quality of employee–manager relationships has been widely examined, particularly through constructs such as LMX, which has been positively associated with voice (Burriss et al., 2008; Park & Nawakitphaitoon, 2018). Earlier meta-analytic work found a consistent positive relationship between LMX and voice (Carnevale et al., 2017), but more recent research has identified curvilinear effects, especially in relation to promotive voice (Carnevale et al., 2020). Affective attachment to supervisors has similarly been shown to influence voice (Davidson et al., 2017).

Coworker relationships are also influential. Drawing on social cognitive theory, Ng et al. (2021) examined voice contagion and found that observing coworkers who speak up can enhance an employee's voice self-efficacy and beliefs about voice instrumentality, thereby increasing their own likelihood of speaking up. Premeaux and Bedeian (2003) investigated how self-monitoring moderates the relationship between personal and contextual factors and voice. They found that employees low in self-monitoring were more likely to speak up when they had higher internal locus of control, self-esteem, perceived top-management openness, and trust in their supervisor. Conversely, several studies have documented how negative leader behaviours suppress voice. Perceived abusive supervision (Burriss et al., 2008; Peng et al., 2019; Rafferty & Restubog, 2011) and supervisor undermining (Sun et al., 2022) have

been linked to reduced willingness to speak up, highlighting the importance of the leader's role in cultivating an environment conducive to voice.

Managers are typically viewed as the primary targets of voice due to their formal authority and their access to the resources necessary for implementing suggestions (Burriss, 2012; Burriss et al., 2017). However, managers are not merely passive recipients of voice; their responses play an active and influential role in shaping voice outcomes. Recent research has examined a range of managerial reactions, including endorsement (Li et al., 2019; McClean et al., 2022; Schreurs et al., 2020), non-endorsement (King et al., 2019) and the broader consequences of these responses (Zhang & Chen, 2023). For instance, King et al. (2019) found that even when leaders did not endorse employees' suggestions, their sensitivity in explaining the decision fostered a sense of voice safety, which in turn increased employees' intentions to speak up in the future. Similarly, Zhang and Chen (2023) identified a curvilinear (inverted U-shaped) relationship between voice frequency and job performance, mediated by voice endorsement. Their findings suggest that moderate levels of voice are more likely to receive managerial endorsement and lead to higher job performance, whereas both low and excessively high frequencies of voice are less likely to be endorsed, potentially reducing performance outcomes.

Voice expressed by individuals within a group can both influence and be influenced by the surrounding group context. Although voice often arises in team settings, it is frequently initiated as an individual behaviour shaped by one's perceived responsibility or risk. For example, Hussain et al. (2019) demonstrated that when group members have overlapping knowledge about an issue (i.e., high information redundancy), individuals are more likely to experience diffusion of responsibility, which is a psychological state characterised by reduced personal accountability. As a result, employees become less inclined to speak up, particularly when they believe others are equally aware of the issue.

This effect was found to be stronger among individuals with high-quality leader–member relationships, possibly due to the assumption that their manager would be informed through other trusted channels. In a different cultural context, Khan et al. (2022) investigated how diversity faultlines within teams affected upward voice in culturally diverse Indian organisations. Their findings revealed that individuals were more likely to consult in-group members before voicing concerns to leaders, emphasising the role of social navigation and relational considerations in collectivist cultures. Additionally, McClean et al. (2018) found that promotive voice expressed in group settings, but not prohibitive voice, was positively associated with leader emergence via increased status. Notably, this relationship was contingent on the voicer’s gender, suggesting that the social consequences of voice in groups are shaped by both behavioural content and identity cues.

Moreover, research has examined how organisational and structural factors shape voice behaviour. These include the organisation’s engagement in corporate social responsibility initiatives (Wang et al., 2020; Zhao et al., 2022), the availability and quantity of voice mechanisms (Spencer, 1986), organisational restructuring processes (Cheung, 2005) and top-down communication structures and practices that govern employee expression (Prouska et al., 2023).

Importantly, although voice behaviours originate at the individual level, they often carry broader multilevel implications. For instance, Duan, Wang et al. (2022) found that organisational culture moderates how newcomers’ voice is interpreted. Specifically, in individualistic cultures, challenging voice enhanced perceptions of newcomer competence through its perceived constructiveness. Conversely, in collectivistic cultures, supportive voice enhanced perceptions of warmth via prosocial motivation. Similarly, Li and Tangirala (2022) demonstrated that both promotive and prohibitive voice at the individual level contributed to

overall team resilience, highlighting how individual expressions of voice can shape collective team outcomes.

3.7.2 Group and team level

At the group level, group voice refers to the extent to which team members collectively express constructive ideas, feedback and suggestions for improvement (Walumbwa et al., 2012). From a within-group perspective, Li et al. (2017) proposed that group voice emerges when team members develop a shared belief that voicing concerns is a common and supported behaviour within their team. Alternatively, Frazier and Bowler (2015) conceptualised group voice as a collective behaviour, whereby the group, acting as a cohesive unit, communicates improvement-oriented suggestions to supervisors. They contend that such coordinated, group-level expression is more likely to influence organisational change than dispersed individual efforts. Overall, social interactions within teams shape members' shared perceptions about the appropriateness and effectiveness of speaking up, whether the voice is directed internally toward peers or externally toward management (Klaas et al., 2012; Morrison, 2011).

Studies have consistently shown that group voice positively influences both group- and individual-level performance outcomes (Erez et al., 2002; Huang & Paterson, 2017; Nelson & Proell, 2018; Walumbwa et al., 2012). For example, MacKenzie et al. (2011) found that sales teams engaging in group voice demonstrated higher effectiveness and achieved superior financial results. Huang and Paterson (2017) showed that ethical leadership fosters ethical group voice, which in turn enhances ethical performance, defined as adherence to regulatory, professional and organisational standards. Frazier and Bowler (2015) further demonstrated that the presence of a strong group voice climate facilitates the emergence of group voice behaviours, thereby boosting overall group performance. Similarly, D'Innocenzo

et al. (2016) found that unit-level voice climates promote greater unit empowerment, which leads to stronger collective engagement among team members.

Leaders exert considerable influence on group voice behaviour through their leadership styles (e.g., abusive supervision, Feng et al., 2022; ethical leadership, Huang & Paterson, 2017; Walumbwa et al., 2012), quality of relationships with subordinates (e.g., LMX, Zhao et al., 2022) and personal traits such as narcissism (Zhou et al., 2021). For example, Shepherd et al. (2019) examined how the amount of information team members possess, and their perceptions of their supervisor's openness shape their willingness to voice concerns to both their group and supervisors. The authors found that greater awareness of a project's flaws increased employees' willingness to speak up. This effect was amplified among those with higher prosocial motivation and stronger beliefs in their supervisor's receptiveness to input. However, other studies have revealed more nuanced patterns in the dynamics of voice. For instance, Detert et al. (2013), through a qualitative investigation, highlighted that the perceived value, articulation and implementation of voiced ideas differ depending on the hierarchical level and organisational location of the voice target. They found that voice directed toward a unit's focal leader, who has decision-making authority, was positively associated with unit effectiveness, regardless of whether the input came from the leader's direct subordinates or employees outside the unit. Conversely, voice directed toward coworkers with limited influence over outcomes was negatively associated with unit effectiveness, emphasising the importance of directing voice toward actors with the capacity to enact change.

Recent research has advanced the conceptualisation of group voice by examining how teams interact with and respond to voiced ideas over time. Satterstrom et al. (2021), in a 31-month longitudinal study of healthcare teams, reconceptualised voice not as a singular act but as a cultivation process involving ongoing contributions from multiple actors. Voice can be

especially important in the healthcare industry to enhance patient safety, improve team coordination and foster a culture of learning and continuous improvement. Their findings suggest that even ideas initially dismissed can be revived, reshaped and eventually implemented through a series of interactional practices. These practices, such as amplifying, developing, issue-raising, exemplifying and legitimising, serve to maintain momentum and generate support for voiced ideas within teams. Similarly, Bain et al. (2021) demonstrated that when one team member publicly amplifies another's voice (i.e., endorses the idea while explicitly crediting the original speaker), it enhances the perceived status of both the voicer and the amplifier, and leads to more favourable evaluations of the idea's quality. Further extending the social dynamics of voice, Newton et al. (2022) found that challenging voice within teams signals work quality and improves a member's professional reputation, which subsequently influences future team assembly decisions. In contrast, supportive voice fosters interpersonal trust and friendship, which also contributes to one's likelihood of being selected for future team collaborations. Together, these findings highlight the relational and iterative nature of group voice and highlight how the treatment of voiced ideas influences both individual standing and collective outcomes.

3.7.3 Organisational level

Organisational-level voice remains relatively underexplored within the organisational behaviour literature. To the best of my knowledge, only one study, by Lam and Mayer (2014), has directly examined voice at the organisational level, conceptualising it as the aggregate of individual voice behaviours. Drawing on time-lagged field data from 132 employees and their supervisors across 41 hospitals, the authors found that higher levels of aggregated customer-oriented voice were positively associated with hospital-level service performance. Specifically, when hospitals acted on collective voice that emphasised customer needs, this responsiveness led to improved service quality and, in turn, enhanced customer satisfaction

and overall organisational performance. While direct examinations of organisational-level voice are scarce, related constructs have received some attention. For example, Knoll et al. (2021) investigated organisational voice climates, defined as shared perceptions of an organisation's policies, norms and practices regarding voice, and their influence on organisational-level implicit voice theories and silence behaviours. Their findings suggest that shared implicit voice theories significantly predict silence motivations, even beyond the effects of voice climate and managerial openness. This highlights that organisational cultures of silence are shaped not only by formal structures and practices, but also by collectively held beliefs about the interpersonal and professional risks of speaking up.

3.8 Voice as a temporal process

In addition to understanding of voice across different levels, studies have also investigated the temporal dimension of voice. This element has been explored from various perspectives, including voice as a cultivation process (Satterstrom et al., 2021), the role of informal social networks (Detert et al., 2013), social processes shaped by individual responses that voicers and recipients (coworkers and managers) show at different levels (affective, behavioural and cognitive) (Nieberle & Fladerer, 2025) and the interplay of formal and informal mechanisms (Townsend et al., 2022). These approaches emphasise that voice unfolds over time, engaging multiple actors at different organisational levels.

Satterstrom et al. (2021) conceptualised voice as a multistakeholder process involving a diverse range of social actors who interact to cultivate voice ideas that might have initially been rejected. This process often occurs within teams, where a team member first speaks up within the team and plays an active role in refining ideas. Detert et al.'s (2013) 'theory of voice flows' also offers a temporal framework for examining the nature and influence of multiple pathways for voice, highlighting the importance of strategically selecting actors within informal networks. More recently, Nieberle and Fladerer (2025, p. 25) conceptualised

‘voice echoes’ as “a reciprocal and potentially non-linear influence process between a voicing employee, their coworkers, and their manager in their roles as voicers and recipients”, where voice provokes affective, cognitive and behavioural responses in voicers and recipients (coworkers and managers) as targets or observers. Townsend et al. (2022) proposed a framework accounting for multiple voice pathways that span both informal and formal mechanisms, allowing employees to address different actors across hierarchical levels concurrently. A shared feature of these temporal-based perspectives on voice is that they move beyond the conventional notion of voice as a discrete event and, therefore, better capture voice in reality.

There is a need, however, for more empirical testing of how voice unfolds in real-world settings. A key learning from these temporal-based conceptualisations of voice is the need for research to move beyond formal job titles to examine the different voice-related roles that individuals adopt as part of their workplace interactions. Since employees and managers engage in continuous exchanges as part of daily work, temporal and process-based conceptualisations of voice highlight that voice is rarely a one-off act. Instead, it is often embedded in a dynamic social process. Within this process, individuals may take on distinct roles such as voicers (those who speak up), endorsers (those who support or legitimise voiced ideas), and implementers (those who act on or operationalise the ideas). Clarifying these roles allows us to trace how voiced ideas evolve over time and illuminates the pathways through which influence, support and resistance emerge. Developing a richer understanding of these roles is critical for identifying where voice gains momentum, stalls or transforms as it moves through an organisation.

3.9 Digital voice channels

In addition to the multilevel nature of voice and the temporal nature of voice as a process that unfolds in real time as part of workplace exchanges, there are also different voice

channels, including digital platforms. As organisations evolve, web-based technologies are increasingly reshaping how voice is expressed, particularly through online platforms (Wilkinson et al., 2021). Due to the increased opportunities for work-from-home arrangements during the COVID-19 pandemic, many forms of social media were rapidly adopted in the workplace, expanding opportunities for electronic voice (e-voice) (Bernauer & Kornau, 2022). Social media allows the creation and exchange of user-generated content (Kaplan & Haenlein, 2010), enabling employees to engage in informal dialogue and extend conversations on workplace issues beyond organisational boundaries, thus facilitating employees' engagement in e-voice (Cassinger & Thelander, 2020; Han & Xia, 2020; Holland et al., 2016; Wilkinson et al., 2021).

With growing interest in understanding social media from an affordance perspective where users engage with social media to achieve their intended goals (Ronzhyn et al., 2022; Sun et al., 2020), the exploration of e-voice from an affordance lens is gaining momentum (Ellmer & Reichel, 2021; Hennebert et al., 2021; Khan et al., 2023, 2025; Mao & DeAndrea, 2019). In the context of social media, the concept of affordances focuses on how its material features provide perceived possibilities for its users, such that the same platform may provide different affordances to different users based on their subjective goals (Ellison et al., 2015). Recently, Khan and colleagues (2023) adopted an affordance lens to review voice literature and identify how social media can facilitate voice as a viable mechanism for specific types of voice content. The authors identified five key affordances: visibility, association, persistence, editability and anonymity. The affordance of visibility enables users to shape their self-presentation and control the information they share (Treem & Leonardi, 2012); the affordance of association allows users to connect with others and build social or professional relationships (Khan et al., 2023); the affordance of persistence allows e-voice content to be retrievable after it is shared, enabling users to revisit and build on previous content (Khan et

al., 2023); the affordance of editability allows users to revise content, offering users greater control over how their ideas are expressed (Fox & McEwan, 2017); and the affordance of anonymity enables users to conceal their identity when engaging with a platform (Fox & McEwan, 2017).

There are limited studies explicitly examining e-voice. Using an affordance approach, Ellmer and Reichel (2021) conducted a qualitative examination of three digital organisations to investigate the influence of social interactions and how digital channels influenced employees' voice decisions using these online channels. The authors found that the interplay between technical features of the voice channel and managerial responses to voice both shape how employees perceive the channel to be affording or restricting voice, which in turn influenced their anticipated voice outcomes and subsequently, their willingness to speak up. Notably, employees' decisions to voice were influenced not only by managerial reactions, but also by their direct engagement with the digital voice channel itself.

Some affordances have gained more scholarly attention than others (Khan et al., 2025; Mao & DeAndrea, 2019). For instance, Khan et al. (2025) identified anonymity as a key facilitator enabling employees to speak up on social media. Mao and DeAndrea (2019) found that the more anonymous and less visible employees perceived an online platform to be, the more they perceived the platform to be safer and efficacious, and in turn, they were more likely to engage in prohibitive voice on these platforms. Moreover, Kim and Leach (2020) examined how organisational structure (centralisation) and communication climates (freedom of speech) shape identifiable, in-person voice and anonymous, digital voice. They found that employees in highly centralised organisations, where decision-making power is concentrated at the highest hierarchical levels, were likely to perceive their freedom of speech to be less protected. This in turn, increased their engagement with both voice types, both which

increased positive change enabled by anonymous voice and led to increased affective commitment.

Although not explicitly framing social media as e-voice, some studies have examined the use of social media platforms for taking collective action (Zheng & Yu, 2016), participating in decision-making (Sæbø et al., 2020) and knowledge sharing (Ellison et al., 2015), which are integral to collective e-voice. Parth et al. (2023) conducted netnography (i.e., a specialised form of ethnographic research for different types of computer-mediated social interaction, Kozinets, 2012) in India by following Facebook and WhatsApp groups used by Ola and Uber cab drivers. Through analysing these posts, the authors examined how digitally inexperienced, app-based drivers navigate and integrate physical and digital spaces to create a 'phygital' environment. This hybrid space enabled drivers to form interpersonal bonds and coordinate collective action beyond the reach of managerial surveillance, particularly in response to perceived threats to their agency. Within this space, drivers engage in bonding and bridging, fostering networks of care, mutual support and resistance against various forms of oppression, both individually and collectively. The authors demonstrated that when the relational culture and social commitments are interwoven with an external threat-based identity, which is constructed when drivers collectively frame their experiences as unjust, it could lead to an efficient and effective mobilisation of collective voice to resist subordination attempts by external threats such as algorithmic control, surveillance and isolation.

Together, these studies suggest that both internal and external digital platforms have potential to serve as powerful e-voice platforms. Nevertheless, the mechanisms, motivations and impacts of e-voice on these platforms remain underexplored and merit further investigation.

4 Understanding voice in context

In recent years, researchers on voice have started to respond to calls for more contextually and relationally grounded approaches, especially at the group and organisational level (Morrison, 2023). Yet, there is still a lack of a comprehensive understanding of voice across a broader range of contexts. For example, many studies continue to assume in-person workplace settings, despite the growing relevance of digital platforms and social media that create new spaces for voice expression. This narrow focus on traditional settings risks overlooking how digital contexts reshape power dynamics, visibility and participation in voice processes. There is also a significant imbalance in the literature: while we know much about individual-level outcomes of voice, we know far less about the contextual factors that shape voice at the group and organisational levels (Bashshur & Oc, 2015). This limits our ability to understand how collective voice emerges, is sustained and influences organisational change, which are central issues to both theory and practice. To move forward, we need to deepen our understanding of how context, including social, group, organisational and digital contexts, influences multistakeholder voice processes and their collective outcomes.

A foundational step toward a better understanding of voice behaviour in ‘context’ (e.g., social, group, organisational and digital contexts) is establishing a precise and shared understanding of ‘context’. Johns (2018, p. 22) defined contexts as “situational or environmental stimuli that impinge upon focal actors and are often located at a different level of analysis from those actors”. This broad yet precise definition reinforces the importance of context in moderating, predicting and explaining behaviour (Bamberger, 2008; Cappelli & Sherer, 1991). Echoing Lewin’s (1936) classic insight that behaviour is a function of both the person and the environment, I adopt a contextual approach to illuminate the often-overlooked conditions under which voice behaviour occurs. Contextualisation is essential for avoiding overly simplistic explanations of behaviour, as it allows the inclusion of multi-contextual

factors that shape the voice process (Mowday & Sutton, 1993; Satterstrom et al., 2021). It also helps define the boundary conditions in which voice behaviour emerges, contributing to more robust and applicable theoretical frameworks (Bamberger, 2008).

4.1 The social context of voice: From individual expression to social process

Building on this contextual foundation, Cai and colleagues (2019, p. 210) defined social context as “the multilevel interpersonal stimuli that surround, and are external to, the individual(s)”. This definition invites a shift in focus: from viewing voice as a discrete, dyadic event, typically involving an employee and their manager (Morrison, 2011), toward a more dynamic, multi-actor process (Nieberle & Fladerer, 2025). This reframing recognises the multiple social actors involved in shaping whether voiced ideas are ignored, amplified or implemented (Bain et al., 2021; Burris et al., 2017; Edmondson, 2003).

This multilevel perspective aligns with emerging literature that considers voice as a staged process, unfolding over time through multiple interactions (Dyck & Starke, 1999; Satterstrom et al., 2021). Enacted roles, whether as voicers, endorsers or implementers, provide a framework to understand how different actors contribute to or hinder the progression of ideas. Accordingly, social context must not only account for the individual who speaks up but also those who listen, observe, respond and act (Nieberle & Fladerer, 2025).

4.2 The group context of voice: Influence of group members, information redundancy and group diversity

As organisations move toward flatter structures and team-based work, understanding the group context becomes increasingly critical. Nearly 80% of modern employees work collaboratively throughout the day (Cross et al., 2016), placing group dynamics at the heart of workplace communication. Yet speaking up in group settings is complex. Voice inherently

challenges the status quo and often encounters resistance (Guo & Recalde, 2022; Van Dyne & LePine, 1998). Individuals frequently rely on peers to endorse or reinforce their ideas (Bain et al., 2021), a process that begins before an idea is even articulated. However, team environments can also create barriers to voice, such as information redundancy, where individuals assume others will raise shared concerns, and group diversity, which can simultaneously foster creativity and trigger interpersonal conflict (Carnevale et al., 2020; Guillaume et al., 2017). These dynamics are consistent with diffusion of responsibility theory (Latané & Nida, 1981) and suggest that group characteristics may significantly shape both promotive and prohibitive voice behaviour.

4.3 The organisational and digital contexts of voice: Understanding electronic voice (e-voice) on social media

Alongside social and group contexts, the rise of digital communication has introduced a new frontier for voice: electronic voice (e-voice). Defined as “digital Web 2.0 platforms that facilitate information sharing, user-created content, and collaboration” (McFarland & Ployhart, 2015, p. 1654), social media platforms such as Glassdoor, which enables employees to publicly review their employers, have transformed how employees express concerns, often outside formal organisational hierarchies and to a broad audience (Kaplan & Haenlein, 2010; Khan et al., 2023).

Unlike traditional voice, which is often private and supervisor-directed, e-voice is public, collective and frequently anonymous (Leonardi & Vaast, 2017). This interactivity shifts the focus of voice from individual expression to organisational reputation and trust, suggesting that organisations should consider new mechanisms for capturing, interpreting and responding to these expressions. Yet, research on e-voice at the organisational level remains underdeveloped, particularly concerning its substantive dimensions – quantity, sentiment and content heterogeneity – and their effects on organisational performance.

5 Identified gaps in voice research

Despite notable advancements in research, I identified three significant limitations in research on the contextual influences of voice.

5.1 Limited multi-actor conceptualisation of voice processes

First, the categorisation of actors in voice research and the conceptualisation of voice as a process warrant critical reconsideration. Although existing studies (Duan, Zhou et al., 2022) and reviews (Kim et al., 2023) have made substantial contributions by examining hierarchical roles in voice behaviour, especially in leader–employee dynamics, there remains a notable gap in how voice unfolds in peer-based contexts where members hold comparable levels of authority (Krenz & Burtscher, 2021) and the combination of both managers and coworkers in a network (He et al., 2020). In such settings, the literature has largely overlooked how non-hierarchical actors contribute to the voice process across its stages (Guarin et al., 2025; Satterstrom et al., 2021). This narrow focus restricts our understanding of how voiced ideas progress, or fail to progress, towards implementation, making it difficult to distinguish between successful and unsuccessful voice outcomes. Furthermore, Morrison (2014) highlights that voice research has traditionally centred on employees as the primary unit of analysis, rather than on the voiced ideas themselves. This perspective limits attention to the content and evolution of ideas, and neglects the complex, iterative processes through which ideas are expressed, interpreted, endorsed or dismissed. Despite growing interest in the outcomes of voice, few studies have traced how different actors shape the trajectory of ideas over time. This lack of process-oriented, idea-centred research represents a significant gap in the literature, one that obscures the broader social dynamics underlying voice effectiveness. Addressing this gap is essential for developing a more complete understanding of how voice functions as a socially embedded and multistage process.

5.2 Underexplored group dynamics of information redundancy and group diversity

Second, although voice research at the group level has made significant contributions, particularly through examinations of team climates (e.g., Brykman & O'Neill, 2020; Chen et al., 2021; Frazier & Bowler, 2015), informal and formal team structures (Detert et al., 2013; Khan et al., 2022; Venkataramani et al., 2016) and team dynamics (Brykman & Maerz, 2023; Ohana & Stinglhamber, 2019), there remains several areas of group dynamics yet to be well understood. In particular, the roles of information redundancy and group diversity have been largely overlooked. These two dynamics are particularly relevant to the core of voice behaviour – voice expression and evaluation. Information redundancy influences whether individuals perceive their input as valuable or repetitive, while group diversity shapes the range of perspectives available and how voice is interpreted. Together, they offer a powerful lens into the informational and relational conditions that enable or suppress voice in group settings.

Information redundancy occurs where multiple employees have similar knowledge about a work issue (Hussain et al., 2019). Although information redundancy occurs in many workplaces, existing studies often assume that voice arises either from a single team member offering a unique insight or from a unified group voicing concerns collectively (Li et al., 2017; Zhao, Wu et al., 2020; Zhou et al., 2021). In general, workplaces tend to acknowledge the challenges of working with diverse teams (Hall et al., 2019), especially when encouraging employees to speak up more in increasingly diverse workplaces (Wilkinson et al., 2018). While diversity poses challenges of team conflicts and discrimination among members (Guillaume et al., 2017), diverse members provide varying valuable perspectives to enhance creativity and innovation, and improve organisational functioning (Wilkinson et al., 2018). Hence, it is important to have contextual understanding to reduce the cost of missed opportunities (Syed, 2020).

Diversity, defined as “differences between individuals on any attribute that might lead to the perception that another person is different from self” (van Knippenberg et al., 2004, p. 1008) is increasingly transforming workforces and employees’ engagement with voice (Wilkinson et al., 2021). It spans across attributes such as educational background, nationality and professional experience. Group diversity, often recognised as a ‘double-edged sword’ (Horwitz & Horwitz, 2007; Milliken & Martins, 1996), results in positive outcomes such as enhanced creativity and innovation (Bunderson & Sutcliffe, 2002; Guillaume et al., 2017), and negative outcomes, such as interpersonal conflict and tension (Hall et al., 2019). This challenge requires organisations to strategise and structure their units where diversity does not hinder employee engagement (Khan et al., 2022). Yet, contextual influence of group diversity on voice behaviour has not been sufficiently examined, with few studies examining the phenomenon alongside cultural contexts (Khan et al., 2022; Meares et al., 2004; Wilkinson et al., 2023) and gender (Bell et al., 2011; Hatipolgu & Inelmen, 2018). While specific dimensions like gender or race are important and merit focused investigation, the broader operationalisation used here provides a parsimonious yet inclusive framework for understanding how diversity shapes voice engagement in everyday workplace contexts. Instead, a multi-attribute operationalisation of group diversity is important to reflect the realistic composition of contemporary work teams, where multiple diversity dimensions often coexist and interact.

It is important to examine these dynamics at the group level because voice processes often unfold within teams where members interact directly and repeatedly. Considering both information redundancy and group diversity are structural features of modern teams that directly influence whether and how employees engage in promotive and prohibitive voice, ignoring these dynamics limits our ability to understand voice behaviour in realistic, heterogeneous group contexts. Moreover, as organisations increasingly rely on diverse, cross-

functional teams, failing to account for these factors may lead to missed opportunities for innovation and ineffective voice interventions. Addressing this gap enables a more nuanced and contextually grounded understanding of voice, with implications for both theory and practice. Hence, there is an urgency to investigate how it may moderate employees' engagement in different types of voice behaviour in realistic workplace contexts where employees tend to share overlapping information (i.e., information redundancy).

5.3 Neglected digital voice (e-voice) and organisational-level impacts

Third, as workplaces are increasingly transformed by meta-trends like digitalisation (Wilkinson et al., 2021), research in electronic voice (e-voice) is gaining traction (Walker, 2021). Unlike traditional in-person voice, typically individualised and directed toward immediate supervisors (Morrison, 2011), e-voice is more expansive in reach and influence, shaping not only internal dynamics such as organisational trust and social capital, but also external perceptions and reputation (Leana & van Buren, 1999). Digital platforms offer affordances, or perceived utilities, which are not offered in in-person communication (Khan et al., 2023). With these affordances, such as anonymity, users can be more strategic and intentional on how they want to communicate their ideas and feedback based on their goals. E-voice platforms, such as enterprise social media or internal forums, are typically designed, governed and interpreted at the organisational level (Vaast & Kaganer, 2013). These platforms reflect affordances that shape how e-voice is expressed and received. Studying e-voice at this level provides a strategic vantage point to understand how e-voice platforms jointly influence e-voice behaviour across the entire organisation, beyond individual or team boundaries. Moreover, organisations are keen to achieve higher levels of overall employee satisfaction and positive WOM to build organisational external reputation and increase capacity to attract better talent and customer goodwill (Keeling et al., 2013), hence these are important factors to consider. While emerging scholarship recognises that voice targets now

include broader, macro-level audiences (Mowbray et al., 2015), voice literature has yet to fully understand and examine the phenomenon of e-voice and its collective impacts on organisations.

Unlike in-person verbal communication, e-voice is expressed in alternative formats like text (Khan et al., 2023). By engaging with digital platforms, employees' e-voice contributes to collective impact on the organisation, such that when aggregated, e-voice consists of multiple dimensions including its quantity, sentiment and content heterogeneity. E-voice quantity refers to the collective volume of feedback, opinions, and ideas expressed by employees within an organisation. It serves as an important indicator of how many employees are proactively engaging, whether to promote change, express dissatisfaction, or contribute constructively to organisational improvement (Morrison, 2011). E-voice sentiment refers to the affective dimension of e-voice, often described in terms of its valence or polarity – that is, whether the expressed feedback, opinions or ideas are positive, negative or neutral (Sharma et al., 2025). More broadly, sentiment reflects an individual's attitude toward a specific target or topic (Mohammad, 2016). At the organisational level, e-voice sentiment captures the overall emotional tone of employee feedback, indicating collective opinions, emotions and attitudes toward the organisation (Mohammad, 2016). E-voice content heterogeneity refers to the variety and diversity of issues, concerns and feedback expressed by employees across different organisational roles and units (Chatman & O'Reilly, 2016). High content heterogeneity signals a wide spectrum of employee perspectives, which can foster creativity, innovation and organisational adaptability (Corritore et al., 2020). Together, each dimension uniquely contributes to the overall influence of e-voice at the organisational level on organisational performance. Without a more nuanced investigation into these facets of e-voice, its role in influencing employee satisfaction, positive word of mouth and long-

term organisational performance remains conceptually underdeveloped and insufficiently theorised.

6 Research questions and empirical studies

In response to these gaps, this thesis seeks to extend knowledge around how social, group, organisational and digital contexts shape voice behaviour. I investigate the following three research questions.

Research question 1: The social context of voice

How do social actors, beyond the voicer, shape the trajectory and outcomes of the voice process through their enacted roles, as framed by role theory?

Voice scholars are increasingly examining voice as a process involving multiple social actors, beyond the voicer and immediate authority figures, who shape the trajectory of voiced ideas. For the successful navigation and implementation of voiced ideas, it is important to understand the social context and the roles played by different social actors (Satterstrom et al., 2021). Previous voice literature has provided comprehensive understanding on hierarchical dyadic relationships between voicers and managers at the initial stage of voicing. However, understanding the social context reveals how voiced ideas progress beyond this initial stage, and how different actors contribute to or constrain its success across stages (Nieberle & Fladerer, 2025). Moreover, while prior voice research has richly documented behaviour such as endorsement, these are typically examined as discrete actions rather than as expressions of enacted roles by identifiable social actors such as endorsers in a voice process. Although the literature on these actors remains emergent, and the current body of literature is fragmented and primarily focused on single-actor perspectives, a review is a necessary foundational step to establish what is currently known and where the gaps lie. It is important

to first establish the current state of knowledge, in terms of what is known, what remains underexplored, and how existing studies conceptualise the involvement of different actors. Building on this foundation, future research can empirically examine the dynamic and interdependent relationships among actors, as this area of voice scholarship remains in an early stage of theoretical and methodological development.

I employ a narrative literature review methodology to synthesise existing voice research and develop a role-based typology of social actors involved in the voice process. Based on the results of the review and guided by role theory (Biddle, 1986), I conduct a narrative literature review of 268 articles encompassing 370 studies. Subsequently, I identify and categorise six key social actors – voicers, voice endorsers, voice solicitors, voice implementers, voice allies and voice bystanders – that have important influences on voice progression and outcomes. Based on the findings of this study, I develop a conceptual framework that maps these roles and their interrelations, offering a more processual and socially embedded understanding of voice (Guarin et al., 2025). This framework informs the design of the subsequent empirical studies and provides practical insights for strengthening voice systems within organisations.

Research question 2: The group context of voice

How do group dynamics relating to information redundancy and group diversity influence individual promotive and prohibitive voice behaviour?

In workplaces, information redundancy is often unavoidable as team members tend to work closely with each other, hence face similar challenges and tend to become aware of who knows what through extensive meetings and informal conversations (Fayard & Weeks, 2007). Although workforces are inherently diverse, studies on voice behaviour in group contexts tend to assume employees are homogenous (Wilkinson et al., 2018). To gain holistic decision-making opportunities for enhancing team effectiveness, while ensuring valuable

ideas and feedback from minority groups are not lost, it is important to consider the lived reality of employees within diverse groups (Hoogendoorn et al., 2013; Khan et al., 2022). Diversity is widely recognised as a ‘double-edged sword’, with positive and/or negative implications (e.g., team and leader performance, wellbeing, social integration) based on its contexts (Bunderson & Sutcliffe, 2002; Groves & Feyerherm, 2011; Guillaume et al., 2017). If diversity is well managed, units and organisations may reap maximum benefits from creating inclusive and trustworthy environments for a heterogenous workforce to speak up (Hatipoglu & Inelmen, 2018).

I employ a vignette-based experimental design to systematically manipulate and isolate key contextual variables, information redundancy and group diversity, while holding other factors constant. This approach allows for a controlled examination of how specific features of the group context influence members’ voice intentions, which is difficult to achieve in field settings where multiple contextual factors are intertwined. While vignettes do not replicate the full complexity of real-world environments, they are a well-established method for studying perceptions and decision-making in contextually rich scenarios (Aguinis & Bradley, 2014). It complements existing qualitative and field-based research by providing experimental evidence on the influence of group-level social dynamics and helps build theory in an area where empirical work is still emerging. Drawing on Parker et al.’s (2010) proactive motivational states framework, particularly the ‘reason to’ and ‘can do’ pathways, I examine diffusion of responsibility and voice self-efficacy as mediating mechanisms linking group dynamics to group member promotive and prohibitive voice behaviour. I contribute to a more nuanced understanding of voice in group contexts, offer practical implications for team composition, communication strategies, and voice-supportive interventions aimed at fostering both innovation and accountability in group settings.

Research question 3: The organisational and digital contexts of voice

How does organisational-level voice expressed through digital platforms (e-voice) influence organisational outcomes, such as employee satisfaction, positive word of mouth and organisational performance?

Digital platforms provide opportunities for investigating a trending sub-genre of voice: e-voice (Walker, 2021). While traditional voice tends to be unidimensional, in terms of audible conversations, e-voice in textual format offers a multidimensional approach to understanding how voice can impact organisational performance in digital contexts. Digital platforms, such as social media, offer affordances (i.e., perceived utilities) for individual employees to engage with a wider network of audiences, while aggregated e-voice content can have collective impact (Khan et al., 2023). At the organisational level, each dimension of e-voice – its quantity, sentiment and content heterogeneity – can shape proximal and distal organisational outcomes.

Based on affordance perspectives (Khan et al., 2023) and organisational social capital theory (Leana & van Buren, 1999), I analyse e-voice within a real-world, publicly accessible digital context. I use a dataset of 347,305 employee reviews from the ‘Advice to Management’ section on online employer review platform Glassdoor over 5 years, combined with firm-level financial data from COMPUSTAT on the employers. I apply machine learning techniques combined with sentiment analysis and topic modelling (Barde & Bainwad, 2017; Wankhade et al., 2022) to capture the substantive features of e-voice and assess their relationships with organisational outcomes over time.

I contribute to emerging conversations on the digital transformation of voice by offering an empirical basis for understanding how public expressions of e-voice affect employee satisfaction, positive word of mouth, and organisational performance. The findings

inform both theory and practice, highlighting the strategic significance of e-voice in shaping organisational responses and long-term success in digitally enabled work environments.

Collectively, these three studies provide an integrated, multilevel understanding of employee voice across social, group, organisational and digital contexts.

Thesis structure

This thesis has five chapters. Chapter 2 addresses research question 1, focusing on the social context of voice by examining the roles of various social actors. Chapter 3 addresses research question 2, exploring the group context of voice, with particular attention to information redundancy and group diversity. Chapter 4 turns to the organisational and digital contexts, addressing research question 3 by investigating how electronic voice (e-voice) influences organisational outcomes. Each empirical chapter concludes with a summary and an introduction to the subsequent chapter. The thesis concludes with Chapter 5, which presents a general discussion of the overall findings, outlines theoretical and practical implications, and proposes directions for future research.

7 Philosophical approach

This thesis is grounded in an objectivist ontology and a positivist epistemology. Specifically, I adopted theoretical perspectives and methodological approaches aligned with this philosophical stance for investigating the voice phenomenon (Burrell & Morgan, 2016). From a positivist standpoint, reality is assumed to exist independently of the researcher and can be systematically studied through observation, measurement and scientific inquiry (Gray, 2014). Based on this view, knowledge should aim to be objective, generalisable and replicable, consistent with the epistemological foundations of the natural sciences (Donaldson, 1996).

To investigate how voice operates across social, group, organisational and digital contexts, I adopted a nomothetic approach, applying generalisable theoretical frameworks and testing hypotheses through structured, systematic methods (Burrell & Morgan, 2016). I designed each study to progress through clear stages of theory application, empirical testing and methodological innovation (Hansson, 2017). A positivist approach can be seen in my consistent use of quantitative methods, including hypothesis testing, scenario-based experiments and computational techniques, such as machine learning and sentiment analysis. These methods allow me to produce quantifiable metrics, such as e-voice sentiment scores, voice frequency and organisational performance indicators (e.g., Tobin's Q), that support explanatory and predictive analyses across different contexts. Throughout the thesis, I also applied deductive reasoning, progressing from theory to data through the formulation and testing of specific hypotheses. This is consistent with the positivist aim of producing explanatory and predictive knowledge (Wicks & Freeman, 1998). The research proceeded through iterative stages of theoretical refinement and methodological development, maintaining alignment with a scientific, hypothesis-driven inquiry.

At the same time, I recognise that positivism has its limitations. As Popper (2002) argued, no theory can be conclusively verified by repeated observations, since a single disconfirming case may be sufficient for falsification. I also acknowledge the practical constraints of experimental research in organisational settings, particularly when identifying appropriate control and treatment conditions (Gray, 2014). To address these challenges, I designed scenario-based experiments that simulate realistic workplace contexts and recruited participants with relevant real-world experience, such as full-time employees in team-based environments. These measures helped balance experimental control with ecological validity. I also acknowledge that no single philosophical paradigm offers a complete lens for studying complex organisational phenomena. As Kuhn (1996) and Lee (1992) emphasised, different

ontological and epistemological assumptions reveal different facets of reality. While this thesis is grounded in a positivist paradigm, I transparently report methodological limitations in each empirical study and offer broader reflections on constraints and limitations associated with this philosophical lens in Chapter 5.

8 Research contributions

Through this program of work, I seek to advance our understanding of voice by examining how it operates across social, group, organisational and digital contexts. My aim is to contribute to the development of a more comprehensive, multilevel contextual understanding of voice. Below I outline several theoretical insights and methodological advancements to the field of voice scholarship.

8.1 Theoretical contributions

Through this program of work, I seek to advance knowledge of voice from a context-sensitive perspective that foregrounds how voice is shaped within social, group, organisational and digital contexts. By examining the situated dynamics of voice across these interrelated settings, my research moves beyond traditional individualistic and dyadic conceptualisations, offering a more holistic understanding of how contextually embedded voice emerges, evolves and produces outcomes.

Chapter 2 contributes to voice literature by reconceptualising employee voice as a socially embedded process and multi-actor process, using role theory (Biddle, 1986) as a guiding framework. Moving beyond the traditional focus on the individual voicer or the voicer–manager dyad, this chapter identifies a broader cast of social actors, including endorsers, implementers, solicitors, allies and bystanders, who actively shape the trajectory, interpretation and impact of voiced ideas. Role theory enables this analysis by providing a

structured lens to examine how actors' behaviours are guided by socially defined expectations, norms, and obligations associated with their social roles. It provides a parsimonious yet powerful lens to capture these complexities, enabling a systematic understanding of how voice-related roles and their associated norms govern voice-related behaviour within social contexts. By identifying roles such as endorsers, implementers, solicitors, allies, and bystanders, this chapter highlights how voice is shaped through dynamic role interactions and evolving expectations. This theoretical contribution advances voice literature by shifting the focus from voice as a discrete behavioural act to voice as a collective, relational, and temporally unfolding process embedded in social structures.

Chapter 3 extends Parker et al.'s (2010) proactive motivational states framework by theorising how group-level contextual features influence individual voice behaviour. Specifically, it introduces information redundancy (the extent to which group members share overlapping knowledge) and group diversity (variation in demographic and functional attributes) as critical contextual group factors that shape promotive and prohibitive voice. Through the mediating mechanisms of voice self-efficacy and diffusion of responsibility, this chapter deepens the theoretical understanding of how motivational states interact to influence promotive and prohibitive voice.

Chapter 4 advances voice literature by introducing and theorising e-voice – voice expressed through public digital platforms – as a distinct organisational phenomenon. Drawing on affordance perspectives (Khan et al., 2023) and organisational social capital theory (Leana & van Buren, 1999), this chapter conceptualises e-voice as shaped by digital platform features (e.g., visibility, persistence and reach) and social relational resources within the organisation. By analysing the quantity, sentiment and content heterogeneity of employee reviews on online employer review platform Glassdoor, the chapter demonstrates how different dimensions of e-voice are associated with employee satisfaction, reputational

outcomes (e.g., positive word of mouth), and organisational-level performance. The analysis focused specifically on ‘Advice to Management’ textual content that explicitly addressed management or internal organisational practices. While Glassdoor reviews are publicly accessible, they often contain voice aimed at internal stakeholders, such as managers and organisational leaders, indirectly. These reviews reflect employees’ attempts to influence internal practices, signal dissatisfaction, or advocate for change – aligning with the concept of e-voice. This theoretical contribution expands the scope of voice research into digital contexts, offering a framework for understanding how employee input expressed online operates outside traditional hierarchies and has tangible organisational consequences.

Overall, I seek to enrich theoretical understandings of voice by showing how established frameworks can be adapted to diverse organisational contexts. I respond to contemporary calls for research that captures the situated, contextual nature of employee voice, offering a more expansive conceptual foundation for future inquiry.

8.2 Methodological contributions

Methodologically, across the three empirical studies, I apply diverse methodologies, including rigorous multi-method, multi-source research designs to enhance the validity, generalisability and contextual depth of my findings. I combine a narrative literature review, an experimental vignette study and a longitudinal analysis of web-scraped textual data using machine learning techniques and data linking. This approach enables robust, context-sensitive examination of voice across social, group, and organisational and digital contexts.

I tailor each study to test theoretical mechanisms within its specific context, allowing for a more nuanced understanding of how voice operates under different conditions. The combination of quantitative synthesis, controlled experimentation and large-scale computational analysis reflects a methodologically pluralistic strategy that aligns with the complexity of the voice phenomenon. Importantly, the analysis of objective datasets in

Chapter 4 using machine learning, topic modelling and sentiment analysis makes a notable contribution to voice literature, because these methods have not been sufficiently used to examine organisational-level voice phenomena, despite the organisational-level impacts.

In addition, this thesis advances a conceptual and methodological framework for investigating voice as a socially embedded, dynamic and context-dependent process. By integrating diverse data sources and analytical techniques, I offer a methodological roadmap for future researchers aiming to capture the multiple and evolving nature of voice in contemporary organisations. This contribution supports the advancement of both theoretical rigour and empirical innovation in voice research.

The next chapter focuses on my first study which is a narrative literature review which aims to better understand the roles different social actors play in facilitating (or hindering) the successful navigation and implementation of voiced ideas.

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Interlude to Chapter 2

Chapter 2 builds upon the conceptual foundations established in the preceding literature review in Chapter 1 by examining the social context of voice. Recognising that voice is not enacted in isolation, but shaped by the interactions among multiple organisational actors, I explore how various individuals involved in the voice process influence its trajectory and outcomes. Adopting a role theory (Biddle, 1986) perspective in Chapter 2, I systematically examine the roles of key social actors, including voicers, voice endorsers, voice implementers, voice allies, voice solicitors and voice bystanders, situated along the voice process. By synthesising existing literature and identifying underexamined roles and interactions, I seek to provide a more comprehensive and multistakeholder understanding of voice processes in organisations.

Chapter 2: The social context of voice: A narrative literature review of social actors involved in the voice process

Abstract

Employee voice is increasingly understood as a complex, socially embedded process shaped by multiple social actors beyond the individual voicer. These actors and their interactions play a critical role in determining whether and how voiced ideas gain traction. Despite this, empirical insights into voice as a multistakeholder, interactional process remain fragmented. To extend knowledge on how employees can help or hinder one another's voice efforts in ways that impact teams and organisations, I conduct a narrative literature review of 268 articles encompassing 370 studies. Six key social actors were identified in the voice process: voicers, voice endorsers, voice solicitors, voice implementers, voice allies and voice bystanders. I map these roles across various stages of the voice process, from the initial expression of ideas to their implementation and synthesise knowledge on how each actor contributes to or hinders voice outcomes. By reviewing and highlighting the social dynamics that shape how voice is expressed, heard and acted upon, this study contributes to a more nuanced and realistic understanding of voice as a multistakeholder, contextually contingent phenomenon. I conclude with recommendations for future research to further explore voice as an inherently collective and socially influenced process.

Keywords: Employee voice, social actors, social context, role theory, narrative review.

1 Introduction

Chapter 2 addresses research question 1: How do social actors, beyond the voicer, shape the trajectory and outcomes of the voice process through their enacted roles, as framed by role theory? To explore this question, this study undertakes a narrative literature review of the voice literature. Specifically, I synthesise the literature to answer three core questions: (i) who the key social actors are in the voice process, (ii) how these actors influence the progression of voice, and (iii) what roles they play, both individually and collectively, in facilitating or hindering the implementation of voiced ideas.

Voice is an employee's voluntary offer of "ideas, suggestions, concerns, information about problems, or opinions about work-related issues to persons who might be able to take appropriate action, with the intent to bring about improvement or change" (Morrison, 2014, p. 174), but the employee is not a lone ranger in this attempt. Traditionally, studies have mainly focused on voicers and their dyadic social exchanges with managers (Kim et al., 2023). However, an emerging body of literature frames employee voice as a socially embedded process involving multiple social actors, rather than just the traditional voicer–manager dyad (Voronov & Weber, 2020). These actors can shape whether and how voiced ideas are acted upon, possibly in recursive feedback loops. For example, some may solicit voice (Sherf et al., 2019), endorse it (Burris, 2012; Johnson et al., 2024), support or reject it (King et al., 2019), cultivate voice-conducive environments (Satterstrom et al., 2021), implement voiced ideas (Fast et al., 2014) or simply observe as bystanders (Hussain et al., 2019). Yet, scholarly understanding of the roles played by voice-related social actors remains limited, empirical insights are fragmented and there is no unifying theoretical framework to tie them together (Morrison, 2014; Satterstrom et al., 2021; Townsend et al., 2022; Willits & Franco-Watkins, 2021).

In this study, I conduct a narrative literature review of voice literature to better understand the roles different social actors play in facilitating (or hindering) the successful navigation and implementation of voiced ideas. Specifically, I synthesise the literature to answer three core questions: (i) who the key social actors are in the voice process, (ii) how these actors influence the progression of voice, and (iii) what roles they play, both individually and collectively, in facilitating or hindering the implementation of voiced ideas.

Drawing on role theory (Biddle, 1986) and Bashshur and Oc's (2015) Voice, Exit, Neglect, Punishment, Improvement, Loyalty (VENPIL) progressive model of voice, I offer a theoretical framework of the social actors surrounding the voicer and their dynamic involvement across different stages of the voice process. Role theory suggests that roles are patterned social behaviours and characteristics assumed by social actors (Dierdorff et al., 2012). These roles entail specific expectations for each social actor's behaviour as well as expectations of others. During these interactions, social actors interpret and understand their roles and actions and those of others' roles and actions (Anglin et al., 2022). In the context of voice, social actors are identified by their observable behaviour and attitudes (Biddle, 1979), such as the 'voicer' (who speaks up), the voice 'endorser' (who supports voiced ideas) and the voice 'implementer' (who puts these ideas into action).

Role theory (Katz & Kahn, 1978) offers a foundational lens to examine the expectations and behaviors associated with different voice roles. Next, I integrate Bashshur and Oc's (2015) model, which complements this by detailing the antecedents and outcomes of voice within the social context. In Bashshur and Oc's (2015) multilevel review of the impact of voice in organisations, they built on Hirshman's (1970) Exit, Voice, Loyalty, Neglect (EVLN) model and proposed a theoretical Voice, Exit, Neglect, Punishment, Improvement, Loyalty (VENPIL) progressive model of voice. Their model illustrates the process of how voiced ideas are progressed, beginning with employees identifying

opportunities to speak up. Subsequently, they may express their ideas or choose to be silent. Voice refers to employees' proactive engagement, where employees attempt to influence change through communication and feedback. If these ideas are expressed, they may be ignored or acknowledged. If their voice is ignored, employees may choose responses of exit, neglect or punishment. Exit refers to a breakdown in the employee–organization relationship, often resulting from unresolved dissatisfaction. Neglect refers to reduced performance, absenteeism, and disengagement, undermining team and organisational outcomes. Punishment refers to actions taken to express dissatisfaction through harmful means, such as sabotage or interpersonal conflict. If their voice is acknowledged, they can respond through improvement at the group level. Outcomes of voice acknowledged are improvement at the group level include innovation and decision making. Furthermore, if their ideas lead to practical change, their improvement can vary at the individual level (performance, justice perception, job attitudes, relational outcomes, well-being), group level (performance) and organisational level (performance, wrongdoing term). Loyalty refers to a commitment to the organisation despite dissatisfaction, often accompanied by patience and trust in leadership. The authors positioned it as a moderator of the relationship between voice ignored and exit, neglect and punishment in their VENPIL model. Together, by clarifying and integrating the various roles these actors occupy, such as voice endorsers, voice solicitors, voice implementers, voice allies and voice bystanders, I provide a comprehensive framework that illuminates the interactive and evolving nature of voice in organisational settings.

Chapter 2 makes several distinct contributions to the voice literature. As can be seen in Table 2.1, existing reviews have adopted multilevel perspectives (e.g., Bashshur & Oc, 2015), interdisciplinary approaches (Barry & Wilkinson, 2022) focused on context-specific precursors and outcomes of voice (Morrison, 2023; Oyetunde et al., 2022) and most recently, longitudinal analysis of voice (Guarin et al., 2025). In contrast, my study introduces a

multistakeholder perspective that expands the theoretical lens beyond the voicer to include a broader range of voice roles that critically shape whether voiced ideas lead to meaningful change. By integrating role theory (Biddle, 1986), I extend theorisation of voice as a collective and contextually contingent process, offering a more nuanced and actionable understanding of how voice ideas progress (or are hindered) through to implementation. While most studies offer valuable insights into how various social actors engage with voice behaviour in a single voice process, few explicitly address the social actors' roles considering recursive nature of voice processes (e.g., Kim et al., 2023). For instance, voice implementers may reinforce future voicers' behaviour by increasing trust and psychological safety, whereas voice rejectors may suppress future voicers' behaviour (e.g., King et al., 2019). Considering the dynamic nature of voice processes, this study enables a more nuanced understanding of how social actors' behaviour evolves and how actors adapt over time through feedback loops. A role-based theoretical lens allows me to conceptualise how different actors enact their roles at various points in the voice process, highlighting voice as a socially distributed and temporally dynamic phenomenon (e.g., Bashshur & Oc; Satterstrom et al., 2021). Empirically, this study also surfaces gaps in current knowledge and helps voice scholars identify new research questions related to each social actor's characteristics, behaviours and influence, whether they act as facilitators or barriers to voice success. Practically, my synthesis offers actionable insights for organisations. Understanding how different actors influence the voice process allows organisations to create targeted social actors' interventions that address the broader social context of speaking up (Satterstrom et al., 2021).

Table 2.1: Summary of existing reviews and meta-analyses of voice literature

Focus	Reviews / meta-analyses	Social actors examined
Multidisciplinary (OB, HRM, IR)	Barry & Wilkinson, 2022; Mowbray et al., 2015; Wilkinson et al., 2020; Wilkinson & Fay, 2011.	Voicers
Multilevel (individual, group / team, organisational)	Bashshur & Oc, 2015; Cai et al., 2019.	Voicers
Voice and silence	Morrison, 2023; Morrison, 2014.	Voicers
Antecedents and / or outcomes of voice	Chamberlin et al., 2017; Klaas et al., 2012; Morrison, 2011; Oyetunde et al., 2022.	Voicers
Level-specific voice	Carnevale et al., 2017; Chamberlain et al., 2017; O'Donovan & McAuliffe, 2020.	Voicers
Dynamic nature of voice	Khan et al., 2023; Kim et al., 2023, Nieberle & Fladerer, 2025.	Voicers, voice endorsers
Longitudinal analysis of voice	Guarin et al., 2025.	Voicers, voice endorsers, voice implementers

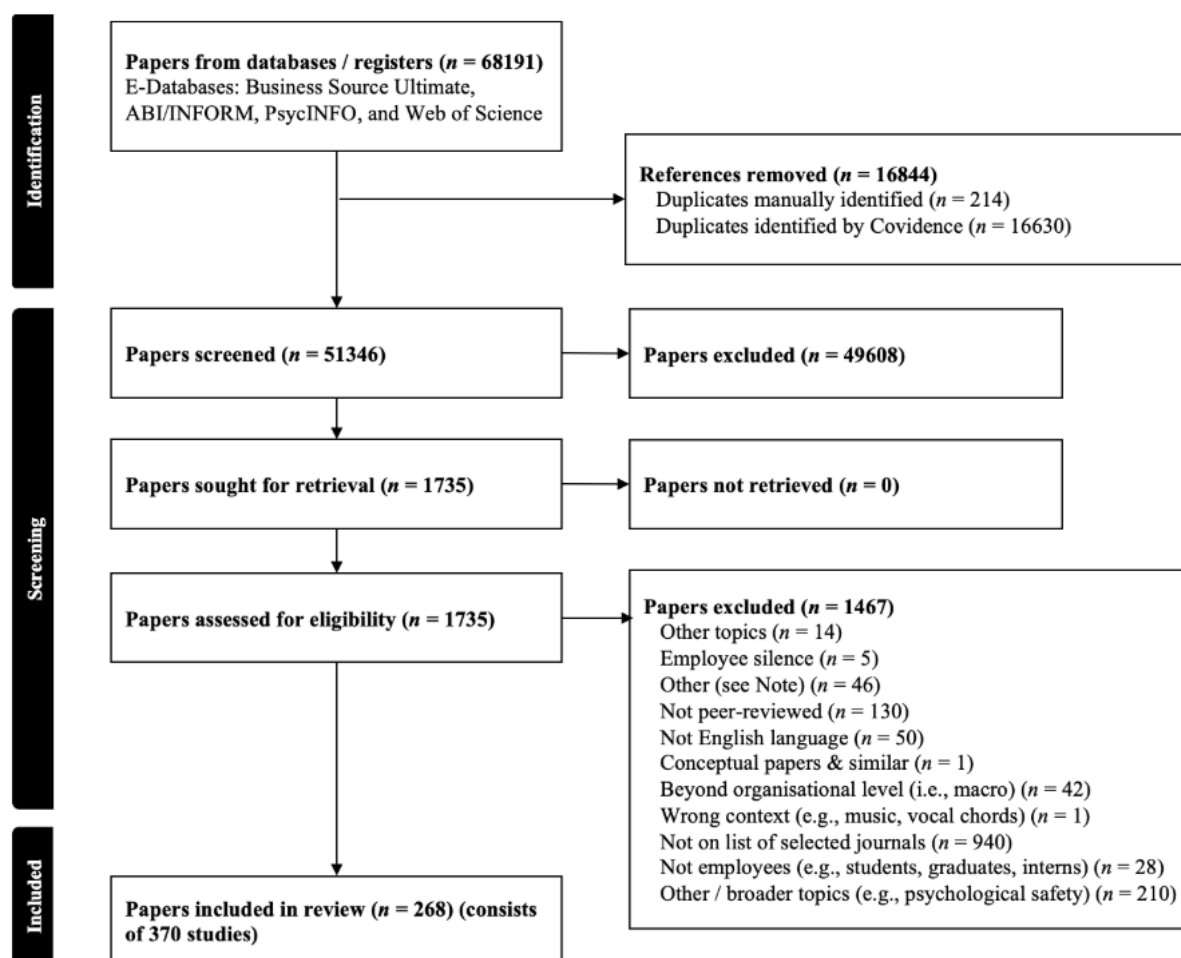
2 Methods

This review adopted an integrative approach consistent with established practices in management and organisational research (e.g., Cai et al., 2019; Morrison, 2023). To identify relevant empirical studies, I conducted a comprehensive search across major electronic databases, including Business Source Ultimate, ABI/INFORM, PsycINFO, and Web of Science. The search targeted peer-reviewed empirical studies (quantitative and qualitative) examining employee voice and related constructs. To capture the range of ‘actors’ involved in voice processes, I used the following primary search terms: (employe* OR member OR team OR group OR leader OR follower OR co\$worker OR peer* OR supervisor OR bystander* OR staff OR subordinate*) combined with (voice* OR speak* up). The search was limited to

studies published in peer-reviewed journals within the field of management and organisational behaviour.

Following similar principles to prior integrative reviews, I refined the sample by excluding papers that did not focus on employee voice or silence, I excluded studies if they: (a) focused on broader topics not specific to voice as a construct (e.g., psychological safety), (b) were not peer-reviewed, (c) were not written in English, (d) focused on non-organisational populations (e.g., students), (e) were set at macroeconomic levels, or (f) were unrelated to management and organisational contexts (e.g., music). To ensure the quality and rigour of included studies, I restricted the final selection to journals with a five-year impact factor of 2.0 or higher, consistent with methodological decisions adopted by Cai et al. (2019) and Morrison (2023). This threshold ensured inclusion of reputable management and organisational behaviour journals while allowing for greater conceptual diversity than more restrictive lists, such as the Financial Times 2021 list. The final list comprised 268 papers published up to the end of 2022. To ensure transparency, my review was conducted in accordance with PRISMA guidelines (Moher et al., 2009). An independent PhD researcher with expertise in voice literature reviewed and coded an initial 27.0% of the studies. Key information was extracted, including article title, journal, authorship, year of publication, theoretical framework and level of analysis. Discrepancies between coders were discussed and resolved to ensure coding consistency. The remaining 73.0% of studies were divided and coded independently by the two reviewers (see Figure 2.1 for PRISMA flow).

Figure 2.1: Study selection process following a PRISMA-guided approach



During the coding process, social actors in each article were identified and coded their role in the voice process, as well as their workplace role (i.e., ‘Individual employee’, ‘Manager / Supervisor’, ‘Team / team member / coworker’). Antecedents, outcomes, mediators and moderators were coded in relation to their roles. Guided by role theory, the roles discussed in the findings were inductively derived from the reviewed literature. The taxonomy of roles presented was developed through a deductive classification process informed by the focus of each study. Specifically, studies were categorised based on the type of voice-related behaviour being examined. For example, studies that examined voice endorsement were classified under the role of voice endorsers. This approach allowed for a

systematic organisation of studies according to the function or orientation of the social actor in relation to voice behaviour. While Biddle's (1979) role theory provided the conceptual foundation for understanding roles as patterned behaviours within social contexts, the specific role labels used in this review (e.g., voicers, voice endorsers, voice allies, voice implementers) were derived from the literature and named to reflect the dominant voice-related function discussed in each study. Hence, the taxonomy represents an extension of role theory, tailored to the voice literature.

Traditionally, team-level voice refers to the shared, coordinated expression of concerns, suggestions, or ideas by team members, often emerging through interaction, consensus, or collective norms. It differs from individual voice in a team context, which involves one or more individuals speaking up independently. Team-level voice is thus conceptualised as a group-level construct, reflecting a collective state or process rather than isolated acts of voicing (Morrison, 2011). This distinction is important for understanding how voice behaviours are shaped by team dynamics, shared goals, and relational interdependence. However, in this review, studies were classified as examining team-level voice when voice was expressed by a member within a team context and was directed toward team members or managers / supervisors. While some studies focused on individual voice acts within teams, they were included under the team-level category to reflect the relational and structural context in which voice was enacted.

3 Findings

Across the 268 publications reviewed (note: some publications consist of multiple studies, resulting in a total of 370 studies), I identified six dominant categories of social actors: (i) voicers, (ii) voice endorsers, (iii) voice solicitors, (iv) voice implementers, (v) voice allies and (vi) voice bystanders. I examined each study to determine the social actor(s)

involved and categorised accordingly (Table 2.2). Most studies focused on a single social actor (e.g., the voicer), although some examined multiple actors (e.g., both the voicer and receiver, as in Satterstrom et al., 2021). The analysis revealed that most empirical studies examined voicers (370 studies), followed by voice endorsers (42 studies), voice solicitors (12 studies), voice implementers (eight studies), voice allies (one study) and voice bystanders (three studies).

Regarding the organisational roles of the actors, I found that most voicers ($n = 308$) were individual employees, while most voice endorsers ($n = 36$) and voice implementers ($n = 6$) were managers or supervisors. Voice solicitors ($n = 12$) were exclusively managers or supervisors. In contrast, all identified voice allies ($n = 1$) and voice bystanders ($n = 3$) were team members. These distributions are summarised in Figure 2.2.

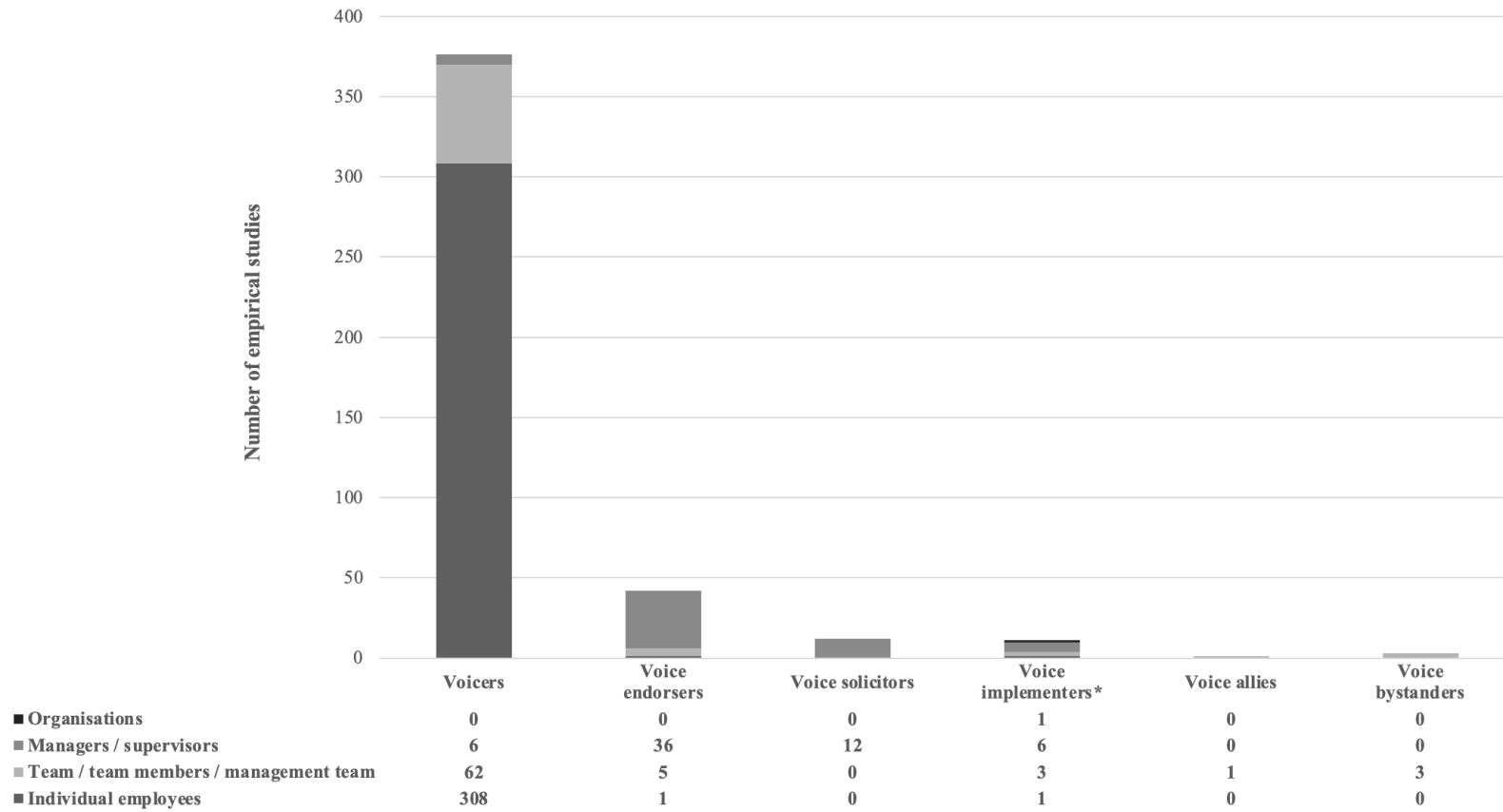
Table 2.2: Summary of results by social actors influencing the voice process

Social actor	Definition of action	Key topics / examples	Key theories / concepts	Key outcomes
Voicers (370 studies)	“An individual’s voluntary and open communication directed toward individuals within the organisation that is focused on influencing the context of the work environment” (Maynes & Podsakoff, 2014, p. 88).	Leadership (e.g., Chen & Hou, 2016; Duan et al., 2022), affect (e.g., Carnevale et al., 2018; Grant, 2013), ethics (e.g., Babalola et al., 2019; Paterson & Huang, 2019; Zheng et al., 2022), workplace relationships (e.g., Carnevale et al., 2020; Park & Nawakitphaitoon, 2018), individual characteristics (e.g., Eibl et al., 2020; Fast et al., 2014; Li et al., 2022).	Social exchange theory (e.g., Brykman & Raver, 2021; Park & Nawakitphaitoon, 2018), conservation of resources theory (e.g., Huang et al., 2020; Röllmann et al., 2021), social learning theory (e.g., Ali et al., 2020; Thompson & Klotz, 2022), social cognitive theory (e.g., Huang & Paterson, 2017; Yan et al., 2022), role theory (e.g., Eibl et al., 2020; Kakkar et al., 2016).	Managerial voice endorsement (e.g., Burris et al., 2022; Burris et al., 2022; Isaakyan et al., 2021; Lam et al., 2022; Lam et al., 2019; McClean et al., 2022; Schreurs et al., 2020), coworker endorsement / support (e.g., Chen & Trevino, 2022; Liu et al., 2022), performance (e.g., De Dreu & Van Vianen, 2001; Furstenberg et al., 2021; Li et al., 2022; Nelson & Proell, 2018; Sessions et al., 2020), creativity and innovation (e.g., chen & Hou, 2016; Della Torre et al., 2021; Li et al., 2021; Liang et al., 2019; Sessions et al., 2020; Yang et al., 2021), turnover (e.g., Avery et al., 2011; Burris et al., 2013; Llyod et al., 2015; McClean et al., 2013), commitment (e.g., Ellis et al., 2022; Ohana, 2016; Ohana & Stinglhamber, 2019), trust (e.g., Korsgaard et al., 1995; Newton et al., 2022), social factors (e.g., Kim et al., 2009; Weiss & Morrison, 2019; Xu et al., 2023).
Voice endorsers (42 studies)	Endorsement: “Extent to which managers endorse, accept, or positively receive a subordinate’s voiced suggestion” (Lam et al., 2019, p. 643).	Voice types (e.g., Burris et al., 2022; Liao et al., 2021), voice content (e.g., Burris et al., 2017; Lam et al., 2019; Ren et al., 2022), leadership styles (e.g., Liao et al., 2021).	Regulatory focus theory (Burris et al., 2022), social exchange theory (King et al., 2019), voice amplification (Bain et al., 2021).	Social status within a group (Bain et al., 2021); future voice intentions (King et al., 2019), perceived idea quality (Bain et al., 2021), voice safety (King et al., 2019).

Voice solicitors (12 studies)	“Extent to which leaders proactively ask for ideas and suggestions from employees regarding ways to improve unit functioning” (Carnevale et al., 2020, p. 505)	Manager-focused (e.g., Fast et al., 2014; Sherf et al., 2019), upward mobility of employee social class (Martin & Harrison, 2022), leader–member exchange (Carnevale et al., 2020).	Upward mobility (Martin & Harrison, 2022), dispositional attribution theory (Park et al., 2022), social exchange theory (Carnevale et al., 2020), personal control (Sherf et al., 2019), long-term orientation (Sherf et al., 2019), role theory (Fast et al., 2014), manager consultation (Tangirala & Ramanujam, 2012).	Voice (Carnevale et al., 2020; Fast et al., 2014; Martin & Harrison, 2022; Sherf et al., 2019; Tangirala & Ramanujam, 2012), employee job rewards (Park et al., 2022).
Voice implementers (8 studies)	“Endorsed ideas are converted into actual work practices that would generate beneficial outcomes” (He et al., 2020, p. 1566).	Managerial skill (e.g., Fast et al., 2014; McClean et al., 2013).	Role theory (Fast et al., 2014), voice incongruence (Zhang et al., 2023).	Implementation (Edmondson, 2003; Satterstrom et al., 2021), employee turnover (McClean et al., 2013), improvement-oriented voice (Fast et al., 2014).
Voice allies (1 study)	No specific definition in voice literature.	Coworker support (Satterstrom et al., 2021).	Voice cultivation (Satterstrom et al., 2021).	Implementation (Satterstrom et al., 2021).
Voice bystanders (3 studies)	No specific definition in voice literature.	Information redundancy (Hussain et al., 2019).	Bystander effect (Hussain et al., 2019), diffusion of responsibility (Hussain et al., 2019).	Voice (Hussain et al., 2019).

* In coding the social actors, I counted studies multiple times if multiple actors were examined. For example, in Burris et al.’s (2022) study, which examined both employees as voicers and managers as voice endorsers, this study was classified under both (i) ‘Individual employee voicers’, and (ii) ‘Manager/supervisor voice endorsers’.

Figure 2.2: Summary of empirical studies by social actors / organisational members



* Note: Voice implementers were examined as team members, and organisations in a single study (Satterstrom et al., 2021)

3.1 Voicers

Voicers are social actors who voluntarily communicate ideas, suggestions, and feedback to persons who have the power to enact change, intending to benefit their organisation (Burris, 2012; Heaphy et al., 2022; Morrison, 2014). Of the 370 studies examining the role of the voicer, 308 studies examined voicers as individual employees in dyadic relationships with their manager or direct supervisor, while 32 studies examined voicers as team members speaking within their team, and 30 studies examined voicers as teams speaking up towards the team manager or direct supervisor. Six studies explored leaders and managers in the role of voicers (i.e., communicating with their upper managers).

The majority of studies examined voicers with the intent to improve organisational/unit functioning; 14 studies on individuals (e.g., Chen & Treviño, 2022), teams (Babalola et al., 2021; Huang & Paterson, 2017) and leaders (Paterson & Huang, 2019) focused on ethical voicers who voiced to challenge and change organisational practices, policies and behaviours that are not normatively appropriate (Huang & Paterson, 2017).

Four studies investigated voicers in the digital context (e.g., social media), all were qualitative case studies. Two of these studies investigated how the technical design of digital applications and platforms influences voice behaviour (Ellmer & Reichel, 2021; Kougiannou & Mendonça, 2021) and two emphasised the role of autonomy in shaping voicers' behaviour (Bernauer & Kornau, 2022; Martin et al., 2015).

3.2 Voice endorsers

Voice endorsers are social actors who support, accept, and positively receive employees' valuable suggestions (Burris et al., 2017). Voice endorsers often hold the power to advance ideas toward actual change and their decisions can be shaped by their characteristics, interests and circumstances (Johnson et al., 2024). Voice endorsers are

important conduits to meaningful organisational improvement as they have the power to “[propel] an idea forward in the change-making process” (McClellan et al., 2022, p. 636). Voice endorsers have been studied at different levels including employees, coworkers, managers, teams and organisations.

I found 42 studies examining voice endorsers, most were focused on managers or supervisors ($n = 36$). This is unsurprising, as a managerial position is associated with power, status and control (Kazén & Kuhl, 2011) and often influence who speaks and what ideas get addressed (Burriss, 2012). A small group of studies examined the influence of voice endorsers on their own outcomes and behaviours (Li et al., 2019; Liao et al., 2021; Urbach & Fay, 2018), including how perceived threat influenced managerial voice endorsers’ behaviour and the experience of strain when endorsing high-quality voiced ideas, particularly in public contexts (Burriss, 2012; Isaakyan et al., 2021; Williams, 2014) and the influence of managers’ information processing of voiced ideas on their endorsement decisions (Burriss et al., 2022; Li et al., 2019; Schreurs et al., 2020).

In terms of other antecedents of voice endorsers’ behaviours, Urbach and Fay (2018) found that managers’ endorsement behaviour was influenced by employees’ perceived power motives and whether their intentions were seen as prosocial or egoistic. Li and colleagues (2019) conducted two studies revealing that ego-depleted managers processed voice less attentively, resulting in more rejections, and that voice endorsers were more likely to endorse these ideas from employees perceived to have higher expertise than others. King and colleagues (2019) also found that managers who rejected voiced ideas critically influenced voice resilience within voicers. These studies showed that even when managers reject voiced ideas, when this is done in careful and sincere ways, they create a psychologically safe space for voicers to take a risk and voice again. These insights reveal the nuanced role of non-

endorsement in shaping future voice behaviour, which is an underexplored area in voice endorsement literature.

In the team context, there were five studies investigating team members as voice endorsers (Bain et al., 2021; Chen & Treviño, 2022). These studies consistently indicated endorsers' positive responses to promotive voice, although there were mixed responses to prohibitive voice. Bain and colleagues (2021) also investigated team members playing a similar role by acting as voice 'amplifiers'. These voice amplifiers increased the perceived quality of voiced ideas, regardless of whether the voicers used promotive or prohibitive voice. There was also evidence that team members who received training for amplifying voicers' ideas obtained higher social status. Two experimental studies by Chen and Treviño (2022) found voice endorsers experienced positive and negative emotions in reaction to ethical voicers using promotive and prohibitive voice types, respectively. Subsequently, these emotions influenced the voice endorsers' decisions. However, Chen and Treviño (2022) found negative emotions could still positively influence voice endorsers' decisions when they attributed courage to ethical voicers.

3.3 Voice solicitors

Voice solicitors are social actors who proactively request and listen to employees' constructive input (Park et al., 2022). Managers typically play this role as they hold the authority to allocate resources for enhancing their unit's functioning (Burriss et al., 2017). When managerial voice solicitors request voice, voicers speak up with "the expectation that [managers] would respond by making systemic changes in their teams" (Sherf et al., 2019, p. 447). To meet these expectations, managers may be selective in who they solicit ideas (Martin & Harrison, 2022; Tangirala & Ramanujam, 2012), often choosing to do so in private settings to enhance team functioning (Sherf et al., 2019). I identified 12 quantitative studies (Carnevale et al., 2020; Fast et al., 2014; Martin & Harrison, 2022; Park et al., 2022; Sherf et

al., 2019; Tangirala & Ramanujam, 2012) examining managerial voice solicitors. Two studies (Fast et al., 2014) examined managers as both voice solicitors and voice implementers. Managers can decide to solicit ideas because of their interests and circumstances. In terms of the factors that influence voice solicitors' behaviours, Fast et al. (2014) presented two studies that examined the impacts of managerial self-efficacy and ego threat on managerial voice solicitors' behaviour. Similarly, Sherf et al. (2019) showed that managerial voice solicitors' sense of personal control and longer-term consequences shaped their voice solicitation behaviour. Martin and Harrison (2022) found effects relating to social class, such that managers are more likely to solicit from employees of elite social class backgrounds than from upwardly mobile employees, even when the latter demonstrated high efficacy and proactivity. Carnevale and colleagues (2020) showed that the effectiveness of solicitation was shaped by the strength of leader–member exchange relationships. Park and colleagues' (2022) two studies examining how managerial voice solicitors may negatively impact their perceptions of employee proactivity, particularly when voicers spoke up prior to being asked. These findings suggest that while soliciting voice indicates openness, it also shapes how managers evaluate the very employees they invite to speak.

3.4 Voice implementers

Voice implementers are social actors who enact endorsed voiced ideas, translating them into meaningful organisational change (He et al., 2020). As Levitt (1963, p. 79) noted, “ideas are useless unless used”, yet voice research has largely overlooked this critical stage. Satterstrom and colleagues (2021) highlight this gap based on the premise that if the purpose of engaging in voice is to improve organisational effectiveness, then this can be achieved only if voiced ideas are acted upon and implemented (e.g., Hirschman, 1970). I identified seven studies focusing on voice implementers. The majority focused on managers or supervisors ($n = 6$), consistent with their formal authority, resource access and positional

power to enact change (Burris et al., 2017; McClean et al., 2013). Two studies by Burris and colleagues (2017) examined managers who simultaneously served as voice implementers and voice endorsers.

Voice implementation occurs at multiple organisational levels. At the organisational level, Satterstrom et al. (2021) showed how ideas refined in teams become formalised into routines, with widespread effects (McClean et al., 2013). At the group level, studies (Edmondson, 2003; McClean et al., 2013; Satterstrom et al.; 2021) revealed how team dynamics, such as knowledge sharing, collaboration and persistence, shape collective voice implementation. For example, in Edmondson's (2003) study on cardiac surgery teams, successful implementation was conceptualised as part of a team's collective repertoire of capabilities and found that teams' ability to implement practices involved knowledge sharing, reflective practices and ease of speaking up. McClean and colleagues' (2013) study examined management teams as voice implementers who share a collective responsibility in decision-making and commitment to change implementation. Satterstrom and colleagues (2021) found the critical role of team members as voice implementers as part of a voice cultivation process wherein even rejected ideas are revived and kept alive by other team members to reach implementation.

At the individual level, Zhang and colleagues (2023) explored how individual employees' willingness to implement their voiced ideas for constructive changes as part of ongoing improvement. This study shifted the focus from one-off voice events to sustained enactment, highlighting the voicer's agency in follow-through. Together, these studies shift the focus from top-down action to multilevel processes, showing how voice leads to change through individual, team and organisational enactment.

3.5 Voice allies

Voice allies are social actors who help voicers sustain ideas that were initially rejected, being ignored or quickly opposed and shot down, to reach implementation (Satterstrom et al., 2021). Voice allies can revive ideas from voicers who have stopped advocating their ideas or have exited the team. My review revealed only one study by Satterstrom and colleagues (2021) investigating the role of voice allies in a structured, social embedded 'voice cultivation' process. By tracking voiced ideas longitudinally, the authors discovered some suggestions that seemed to be rejected in the moment were sustained by team members to improve their team's functioning.

3.6 Voice bystanders

Voice bystanders are social actors who remain passive when issues arise, assuming others will speak up or intervene (Hortensius & de Gelder, 2018; Hussain et al., 2019). Often recognised as 'observers' in public or group settings (Isaakyan et al., 2021), their passivity may be more pronounced when situations are ambiguous or perceived as less severe (Bennett et al., 2014). Theories around the bystander effect address three psychological factors facilitating their behaviour, including diffusion of responsibility, evaluation apprehension and pluralistic ignorance (Latané & Darley, 1970). These mechanisms reflect the cognitive and emotional barriers that can inhibit individual action in collective settings.

I identified one paper by Hussain and colleagues (2019) who conducted three studies spanning field, laboratory and vignette designs to investigate voice bystanders. They found that information redundancy (i.e., knowing that others also know about the same issues) reduced employee voice via a diminished sense of personal responsibility, emphasising the role of group-level information dynamics in shaping voice behaviour. While this work is an important step in recognising voice bystanders as distinct social actors in the voice process,

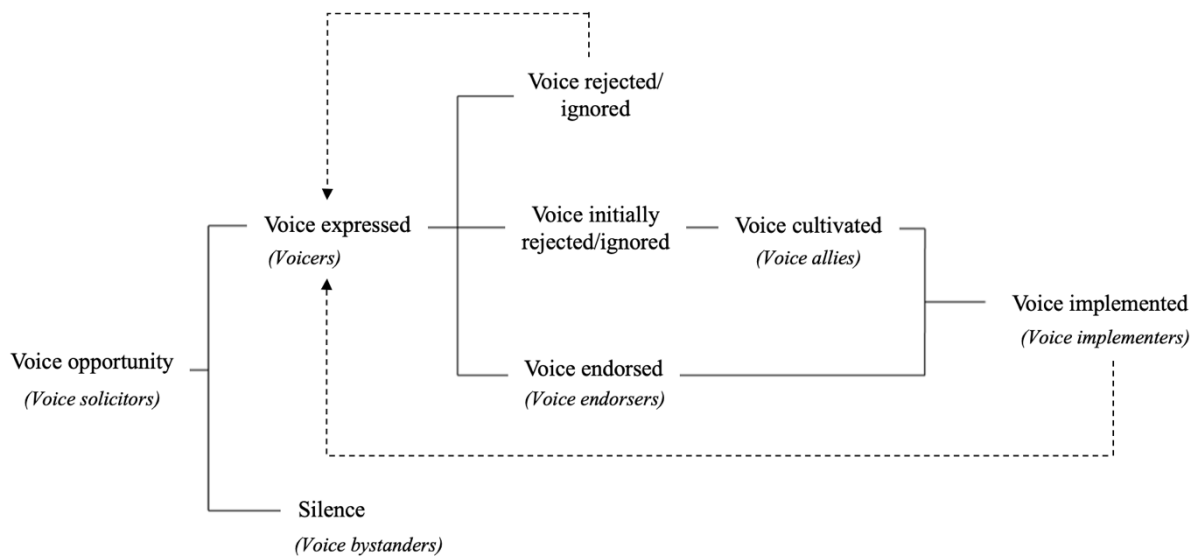
the literature remains limited in its exploration of how group-level characteristics shape individual voice decisions.

4 General discussion and future directions

4.1 Summary of key findings

In this integrative review, I synthesised findings from 268 publications to investigate the influence of different social actors in the voice process. Through thematic coding and analysis, six primary categories of social actors were identified: voicers, voice endorsers, voice solicitors, voice implementers, voice allies, and voice bystanders. I integrated role theory with Bashshur and Oc's (2015) theoretical Voice, Exit, Neglect, Punishment, Improvement, Loyalty progressive model of voice (See Appendix B) to synthesise the findings into a role-based voice theoretical model (Figure 2.3). In this model, voice begins with a 'voice opportunity' that triggers the trajectory of voice development. At this early stage, voice solicitors play an important role even before the actual voicing by helping to signal the need for input, creating voice opportunities (Fast et al., 2014; Martin & Harrison, 2022). Once this opportunity arises, the voicer's role is enacted. While to date most studies have focused on the role of the voicer(s) at different levels (e.g., individual, team), as evident from this review, beyond the voicer, there is a broader system of interdependent social actors whose roles influence whether, how and when voice is heard, endorsed or implemented.

Figure 2.3: Role-based process model of voice trajectories and social actors



Another key finding in this review is that managers were most frequently examined in their roles as voice endorsers, voice implementers and voice solicitors, reflecting their positional authority and control over resources. Their behaviour was shaped by multiple factors including image threat, ego depletion and their perceptions of employee credibility or motivation. I also found a richer diversity of social actor roles in team contexts compared to dyadic interactions. In dyadic settings, voice processes often follow a linear trajectory, typically from voicer to managerial endorser, with limited opportunities for idea cultivation. In contrast, team settings allow for more complex voice pathways: voice allies may revive rejected ideas, voice amplifiers may boost their visibility and voice bystanders may passively suppress voice through inaction. These patterns point to a more distributed and socially embedded nature of the voice process than commonly depicted in prior models. Team members were more likely to be studied as voice allies, voice amplifiers or voice bystanders, highlighting the informal yet consequential influence coworkers exert in influencing voice. Finally, the successful culmination of a voice – its implementation and subsequent organisational impact – is the responsibility of the voice implementers.

4.2 Research directions

Based on this narrative literature review, I identify seven key directions for future research. First, despite the centrality of voice to organisational functioning, the review reveals significant gaps in how the broader voice system is conceptualised and studied. Many studies assume static, role-bound actors, overlooking how voice roles evolve dynamically over time and across contexts. There is a clear need to extend the voice literature beyond the predominant focus on voicers. Moreover, while recent work has begun to examine voice endorsers, considerably less attention has been given to other social actors such as voice solicitors, voice implementers, voice allies and voice bystanders. As roles reflect norms, attitudes, contextual demands and negotiation, they are emergent and evolving depending on the nature of situations as understood by the social actors. This understanding allows for more flexible and informal roles to emerge, and multiple role identities and role-taking to evolve as a function of ongoing interactions and relationships between interdependent social actors (Lee & Farh, 2019). For instance, relatively little is known about how actors such as voice implementers or voice bystanders influence the ultimate outcomes of voice, despite their critical position in determining whether voiced concerns lead to action. Similarly, voice bystanders, although often passive, may become active voice allies under certain conditions (Feldman et al., 2022; Sue et al., 2019). To advance knowledge on how voiced ideas are progressed and communicated from one social actor to another, deeper dives into the range of these different voice roles and their transitions would enrich understanding of how ideas are sustained or lost along voice processes.

A second promising area for future research relates to the current disparity in our understanding of the influence of voice content across different social actors. Although there are a good number of studies investigating voice types and content (e.g., promotive, prohibitive) from the perspective of the voicers and influence on voice endorsers (e.g., Burris

et al., 2022; Chen & Treviño, 2022; McClean et al., 2022), a fruitful area for further research is to investigate how voice content shapes the behaviour of voice implementers, voice solicitors and voice bystanders. This line of inquiry will produce valuable insights into what encourages the cultivation and sustainability of voiced ideas through to final implementation.

Moreover, most studies have examined social actors assuming it is their one-time or first-time action, and they do not account for previous attempts or prior engagement. I see opportunities for more research on the temporal and sustained aspects of voicing and the phenomenon of voice resilience and cultivation. Research should therefore consider prior attempts and relational dynamics over time (e.g., Carnevale et al., 2020). More temporally sensitive, dynamic and longitudinal research that investigates voice as part of a process, rather than a one-off event, can be insightful. This necessitates the investigation of social actors' repeated interactions and participation in voice processes despite having encountered rejection previously (e.g., King et al., 2019; Nieberle & Fladerer, 2025). Investigating factors influencing social actors' sustained engagement in voice processes can enable scholars to understand how voice is sustained over time. Future research should explore how voice outcomes feed back into the system, shaping subsequent social actor roles. Longitudinal designs, system dynamics modelling, and agent-based simulations could help capture these recursive patterns and offer deeper insights into the evolution of voice systems.

Relatedly, more multilevel and mixed-methods approaches, including qualitative and ethnographic approaches, are needed to uncover how different social actors may refine and challenge voiced ideas over time before implementation. Most studies on social actors in the voice process adopt a single-level, often individual-focused lens – typically examining the voicer in isolation or in dyadic relation to an authority figure. This narrow scope overlooks the complex, interdependent roles that multiple actors (e.g., voice endorsers, voice implementers) play across different levels of the organisation. Moreover, existing work

predominantly focuses on individual-level voicers with little consideration of others (e.g., middle managers) who hold partial authority to implement ideas. Middle managers represent a critical but underexplored group, as they mediate between front-line employees and upper management (Paterson & Huang, 2019; Yan et al., 2022). Middle managers may represent their teams to voice ideas to upper management endorsers who implement these ideas (McClellan et al., 2013). Similarly, job hierarchies and organisational structures across industries may shape how voice roles are enacted (Townsend & Mowbray, 2020), yet few studies explicitly examine these contextual differences. To address these gaps, we call for more multi-level research that captures how voice processes unfold across individual, team and organisational levels. Additionally, qualitative and longitudinal methods are well-suited to uncover the temporal dynamics of voice, such as how actors persist in voicing after initial rejection, how ideas are cultivated, or how relational histories at multiple levels shape future voice behaviour (e.g., King et al., 2019; Nieberle & Fladerer, 2025).

Future studies should also investigate a range of different voice contexts beyond the individual level by investigating team-level, organisational-level and digital e-voice contexts. There are opportunities for more team-based voice research to investigate multiple social actors, including the coexistence of voice allies, voice resisters, and voice bystanders. These configurations introduce complexity beyond dyadic exchanges and reflect how voice processes unfold in real-world teams. For example, within-team informal leaders may shape the legitimacy of voiced ideas (Detert et al., 2013) and competing group norms may affect which ideas are amplified or ignored. There is also value in designing interventions that train voice allies or upstanders to promote inclusive voice climates (Collins et al., 2021; Griffith et al., 2022).

Digital voice channels and platforms are reshaping how voice is expressed, making it imperative to study voice in digital contexts (Walker, 2021). These platforms allow

asynchronous, anonymous and persistent communication, introducing new dynamics to how voice is shared and received. There are great opportunities for more research to investigate the digital context of voice (e.g., the use of social media) where social actors are not constricted within the scope of a physical workplace and where employees express their voice online, or ‘e-voice’ (Walker, 2021). E-voice may alter how actors perceive risk, credibility and social influence because they offer various affordances where written content on these platforms “endures after it is spoken” (Walker, 2021, p. 780). Interactions amongst social actors may be mediated by interactions with a platform itself (Ellmer & Reichel, 2021) and voiced ideas can be perceived differently from how they were intended to be communicated. Given the transformational power of technology in daily communication, scholars should explore the potential of digital contexts to influence the role enactment and effectiveness of voice actors on key online platforms, including social media.

Finally, new measurement tools are needed to assess the behaviour of underexamined social actors. While established voice measures exist for voicers (e.g., Liang et al., 2012; Van Dyne & LePine, 1998), no validated scales currently assess voice implementers or voice allies (Zhang et al., 2023). As communication becomes increasingly digital, novel analytic techniques such as sentiment analysis and topic modelling can capture behavioural patterns in textual voice data. Moreover, digital tools should be explicitly integrated into experimental paradigms to reflect how voice is expressed in contemporary workplaces. Table 2.3 provides a summary of these future research directions and opportunities.

Table 2.3: Summary of research directions

Areas of interest	Research directions
Social actors / contexts	<ul style="list-style-type: none"> • More research into social actors beyond the role of the voicer. • Further investigation into how voice content influences other voice roles. • More research into digital contexts of voice (e.g., social media) where social actors are not constricted within a physical workplace. • More studies examining real-world team contexts with multiple social actors, social dynamics and natural distributions of voice roles that exist within teams.

Voice processes	<ul style="list-style-type: none"> • More research focused on better understanding the temporal and sustained aspects of voicing and the phenomenon of voice resilience and cultivation.
Methodologies	<ul style="list-style-type: none"> • More longitudinal and experience sampling methods which are useful for tracing progress and success of voiced ideas. • Development of measurement scales for other social actors' behaviour.

Overall, from a role theory perspective, this review highlights that various social actors play essential, interconnected roles in the voice process, collectively helping ideas progress toward successful implementation. Rather than acting in isolation, these actors work together to enable valuable ideas to reach their full potential within organisations. By mapping the roles, behaviours and interactions of these social actors, this narrative literature review advances the understanding of voice as a socially embedded, multistakeholder process, not just individual behaviour. By clarifying how different actors contribute to voice outcomes, it offers a roadmap for designing interventions that support more inclusive, responsive and effective voice environments.

Collectively, these findings call for a more dynamic, multilevel and socially embedded approach to studying voice, one that reflects the complex realities of organisational life and guides future multilevel, longitudinal and digitally informed research. Having examined how social actors, beyond the voicer, shape the trajectory and outcomes of the voice process through their enacted roles, as framed by role theory, I have addressed research question 1 in Chapter 2 in relation to the social context of voice. I now turn to examining the group context of voice to address research question 2 in Chapter 3. In Chapter 3, I focus on examining how group dynamics, particularly information redundancy and group diversity, influence individual promotive and prohibitive voice behaviour.

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<https://doi.org/10.1016/j.leaqua.2015.01.004>

Appendix

Appendix A: Variables (independent, dependent, moderators, and mediators) examined by social actor and levels

Social actors	Formal job positions	Factors examined in studies involving each social actor	Publications by social actor
Voicers	Individual employees (308 studies)	Independent variables Promotive / prohibitive voice, challenging / supportive voice, prosocial voice, uniform / mixed voice, promotive / prohibitive ethical voice, direct voice (written, verbal), newcomer's voice, newcomer's challenging / supportive / constructive voice, public / private voice, psychological voice, hospital-level customer-focused voice positive counter-stereotypical voice (female agentic voice / male communal voice), abusive supervision, achievement striving, adaption-innovation personality trait, agreement between employees and managers, alignment of issues between team and supervisors' concern, anger, application of voice tactics (public / private; formal / informal), attitudinal commitment, attribution (internal vs. external), authentic leadership, authoritarian leadership, benevolent leadership, calculative commitment, challenge stressors, cognitive style preferences for adaption-innovation, communication striving, communication styles for speaking up (assertive vs. passive), company's corporate social responsibility, conscientiousness, contextual barriers of e-voice (less formalised structure; power and knowledge asymmetry; information overload), coworker's perception of the employee's poor voice quality, cultural distance, customer orientation, defence to the supervisor, degree of impact of COVID-19 on employee, emotion regulation knowledge, employee communication styles (aggressive vs. diplomatic), employee identification with profession, employee overestimation of prosocial voice, employee proactive personality, employee rank, employee regulatory focus, employee underestimation of prosocial voice, employee view of leader-member exchange (LMX), employee's achievement orientation, employee's attitude toward management (cynical vs. trusting), employee's career growth in organisation, employee's daily level of depletion, employee's daily voice impulse control (high vs. low), employee's duty orientation, employee's emotional exhaustion, employee's engagement in illegitimate tasks, employee's fear of external threat, employee's felt obligation to the organisation, employee's impression management motives, employee's increase in perceived organisation embeddedness, employee's initial stance to speak up, employee's instrumental voice perceptions, employee's moral identity internalisation, employee's narcissistic admiration, employee's narcissistic rivalry, employee's non-instrumental voice perceptions, employee's organisational concern motives, employee's orientation: approach / avoidance, employee's other-face concern, employee's perceived risk level (high vs. low), employee's perception of manager's interpersonal justice, employee's personal initiative tendency / overall disposition to be proactive, employee's proactive personality, employee's problem-focused voice in meeting, employee's regulatory focus: prevention / promotion, employee's sense of calling, employee's suggestion-focused in meeting, employee's voicing	Arain et al. (2019), Aryee et al. (2017), Avery et al. (2011), Avey et al. (2012), Babalola et al. (2019), Bernauer & Kornau (2022), Bharanitharan et al. (2019), Bienfeld & Grote (2014), Bretos et al. (2018), Brykman & Raver (2021), Burris (2012), Burris et al. (2022), Burris et al. (2017), Burris et al. (2013), Burris et al. (2008), Carnevale et al. (2018), Carnevale et al. (2022), Chan (2014), Chen & Trevino (2022), Chen & Hou (2016), Cheung (2005), Cooper et al. (2021), Crant et al. (2011), Cunha et al. (2019), Davidson et al. (2017), De Clercq & Belausteguigoitia (2017), de Vries et al. (2012), Deckop et al. (2003), Della Torre et al. (2021), Della Torre et al. (2020), Detert & Burris (2007), Detert et al. (2013),

opportunities, employer's psychological contract breach, ethical leadership, ethical psychological climate, exchange between employee and direct leader, exchange between employee and skip-level leader, exit costs (skill specificity, sunk costs, investment), expected supervisor feedback quality, explanation sensitivity (non-endorsement explanation), explanation specificity (non-endorsement explanation), fear (high vs. low), feasibility vs. desirability concerns, felt obligation for constructive change, follower belongingness need, follower control need, frequency of unethical behaviour observed, functional dependence, gender, global self-esteem, group size, group-focused transformational leadership, helping extra-role behaviour, hindrance stressors, hospital-level customer-focused voice, i-deal content (financial bonus, work hour flexibility, workload reduction) (i-deals are individually negotiated arrangements unique to one employee), idiosyncratic deals in scheduling flexibility and professional development, importance of issue relative to supervisor's assessment, importance of issue to employee, impression management motives, in-role behaviour, information redundancy, interdependencies to implement voice content, intrinsic motivational orientation, job autonomy, job satisfaction, job stressor - P-E fit / role ambiguity / role conflict, leader authentic personality, leader emphasis of intrinsic goals, leader humility, leader inclusiveness, leader narcissism, leader openness, leader perceived employees' overqualification, leader view of LMX, leader-member similarity in nationality, leader's affective state during interaction (positive / negative), leader's affiliative humour, leader's performance goals, LMX, locus of control, magnitude of investment in a job, manager's consultation of employee's ideas, manager's displays of curiosity, manager's ego depletion (high vs. low), managerial openness, manager's personal control (low vs. high), moral leadership, negative affect reactions, non-Five Factor Model personality traits, organisation-based self-esteem, organisation's practice of socially responsible human resource management, overall job satisfaction (or satisfaction prior to a problem), overall physical courage at work, paternal leadership – authoritarianism / benevolence, morality, peer's confirmation / contradiction of employee's initial stance, perceived abusive supervision, perceived impact, perceived organisational politics (high vs. low), perceived political activities in workplace, perceived psychological safety, perceived supervisor embeddedness, perceived supervisor listening, perceived team-oriented leadership, perceptions of gender inequality, personal control (autonomy and impact), politely toned voice message vs. colloquially toned voice message, positive affect reactions, power asymmetries, power-related idea consequences (power threat vs. power gain), prior satisfaction with job, proactive personality, proactive personality congruence, prosocial citizenship motives, provision of non-diagnostic social information to advice (supervisor leadership orientation: self-oriented, team-oriented), psychological contract breaches, quality of job alternatives, quantity of employee voice mechanisms, raising issues aligning with the supervisors' concern, relationship maintenance goal orientation, resources to implement voice content, satisfaction with the group, self-esteem, self-regulatory focus – prevention / promotion, servant leadership, social distance, spatial distance, status striving, strategic display of negative emotions, style of management, supervisor ethical leadership, supervisor listening, supervisor power motive, supervisor proactive personality, supervisor support, supervisor undermining, team culture,

Detert & Edmondson (2011),
Detert & Trevino (2010),
Duan et al. (2017),
Duan, Lin, Wang, & Xu (2022),
Duan, Peluso, Yu, & Pilati (2021),
Duan, Wang, Xu, & Wu (2022),
Duan, Wang, Janssen, & Farh (2022)
Duan, Xu, Wang, Wu, & Wang (2021),
Eibl et al. (2020),
Elicker et al. (2006),
Ellis et al. (2022),
Ellmer & Reichel (2021),
Fan & Lin (2022),
Farh & Chen (2018),
Farnsdale et al. (2011),
Fast et al. (2014),
Fischer et al. (2019),
Frieder et al. (2015),
Fürstenberg et al. (2021),
Gao et al. (2011),
Gilman et al. (2015),
Gok et al. (2022),
Grant (2013),
Grant & Mayer (2009),
Griffith et al. (2020),
Hagedoorn et al. (1999),
Harlos (2010),
Helfrich & Dietl (2019),
Holland et al. (2017),
Holland et al. (2011),
Hoogervorst et al. (2013),
Howard & Reiley (2020),
Hsiung (2021),
Huang et al. (2020),
Huang & Paterson (2017),
Huang et al. (2018),

			team-oriented leadership, top-down employee communication, trait levels of intrinsic and extrinsic motivational orientation, transformational leadership, upward mobility of social class, employer-sponsored voice practices, voice costs, voice directness vs. voicer politeness vs. voicer credibility, voice incongruence (manager-rated voice / employee-rated voice), voice strategies (e.g., direct, deniable, rehearsal, joking), withdrawal, witnessing coworker voice, work self-esteem, work status (full-time vs. part-time), work-flow centrality, workplace social courage.	Isaakyan et al. (2021), Janssen et al. (1998), Janssen & Gao (2015), Jiang et al. (2022), Kadous et al. (2019), Kaine (2012), Kakkar et al. (2016), Kaptein (2022), Kim et al. (2009), King et al. (2019), Kirrane et al. (2017), Knoll & Redman (2016), Koopman et al. (2019), Korsgaard et al. (1995), Lam et al. (2022), Lam et al. (2019), Lam & Mayer (2014), Lapointe & Vandenberghe (2018), Lebel (2016), Lee et al. (2017), Li et al. (2017), Li & Tangirala (2021, 2022), Li et al. (2022), Li et al. (2020), Li et al. (2019), Li & Sun (2015), Liang et al. (2012), Liang (2017), Liao et al. (2021), Lin & Johnson (2015), Lin et al. (2019), Lin et al. (2022), Liu, Chiang et al. (2017), Liu, Song et al. (2017), Liu et al. (2022), Liu et al. (2013), Llyod et al. (2015), Mackey et al. (2020), MacMillan et al. (2020),
Voicers	Individual employees (308 studies)	Dependent variables	Action tendencies to remain silent / speak up (to transgressor, coworker, or manager), advising a peer to speak up, advising a peer to speak up despite non-diagnostic of issue importance, affiliation with peers, affiliation with the supervisor, aggressive voice, challenging voice, constructive voice, cooperative voice, defensive voice, destructive voice, ethical voice, improvement-oriented voice, moral voice, preventive voice, problem-focused voice, voice as potential action, promotive/prohibitive voice, voice about discontent, prosocial voice, informal leader speaking up, subsequent voice (promotive / prohibitive voice), success of voice, suggested salary increases, supervisor-directed destructive voice, self-interested voice, remedial voice, badmouthing, CEO's perceived level of management innovation, choice of communication styles for speaking up (assertive vs. passive), coworker voice – complaining / requesting compensation, comfort levels to speak up, constructive voice delivery, contextual communication orientation, cooperative silence, counterproductive work behaviour, coworker verbal support, creativity, degree of leader granting employee voicing opportunity, denigration of subordinate, dysfunctional resistance, e-voice in the digitalised workplace, emotional exhaustion, employee antisocial behaviour, employee assessment of taking charge ethically, employee deviance, employee emotional exhaustion, employee engagement, employee intention to whistle blow, employee involuntary turnover, employee job performance, employee job rewards, employee job satisfaction, employee organisational citizenship behaviour, employee perception of the coworker's poor voice quality, employee promotability, employee propensity to voice, employee psychological well-being, employee recollection of speaking up, employee satisfaction with appraisal review, employee self-perception of poor voice quality, employee task performance, employee trust in manager, employee turnover intention, employee vigour, employee withdrawal, employee work engagement, employee work fatigue, encouragement / discouragement for digital voice, exit / loyalty / neglect, feedback reactions, follower performance, helping, horizontal solidarity, hospital-level service	

Voicers	Individual employees (308 studies)	Mediators	<p>performance, idea support from supervisor, in-role job performance, initial voice, initiative - affiliative citizenship behaviour, initiative in implementing constructive changes, intention to remain, interpersonal citizenship behaviour, interpersonal deviance, intragroup conflict, irritation, job performance, leader emergence, leader interest in prohibitive voice, leader-directed voice, level of applying formal and public voice tactics to gain endorsement, likelihood of supervisor follow-up for considering voiced idea, liking by leaders, linear voice trajectory, LMX, manager's daily voice endorsement, manager's reaction of social support / undermining, managerial perception of value of voice, managers' evaluation of voicing employees, newcomers' perceived competence, newcomers' perceived warmth, newcomers' socialisation outcomes, next-day state affect (positive and negative), number of employee's treatment errors, nurses' perceived expectancy and effectiveness of voice mechanisms, organisation citizenship behaviour (OCB), oppose creative ideas, organisational outcome – retention / turnover, organisational commitment, organisational innovation, overall performance, participation in gender-parity initiatives, perceived psychological safety, perceptions of influence over workplace matters, performance, personal reputation, promotability, prosocial silence, quadratic voice trajectory, rate of voluntary turnover for registered nurses, recommendation of employee to receive organisation rewards, reliance, supervisors' performance evaluation, time theft, trust, turnover, turnover intentions, undergo training, usefulness of voice content, voice content - importance of issue / interdependencies of enacting change / resources to enact change, voice endorsement, voice intentions, voice presence, voice solicitation, voice strategy, voice to the direct leader, voice to the skip-level leader, voicer's social status, willingness to implement voice, willingness to voice project concerns.</p> <p>Affect, affective commitment, aggregated employee voice participation, anger, approach / avoidance orientation, attributed employee intentions-egoistic / prosocial, attributed motives for employee voicing discontent, authentic leadership, change goal congruence, conflict-avoiding, consideration of issue follow-up, controlled motivation, coworker feelings of (moral) threat, coworker judgment of the employee's incompetence, creative process engagement, daily prohibitive / promotive voice, daily voice impulse control, degree of employee's work engagement, denigration of subordinate, distributive (in)justice, duty orientation, ego depletion, ego threat / self-affirmation, elevation, embeddedness in organisation, emotional exhaustion, emotional labour strategy (deep acting / surface acting), employee approach / avoidance orientation, employee assessment of leader's affect, employee autonomous motivation, employee beliefs about voice instrumentality, employee benevolence, employee overall performance, employee psychological empowerment, employee trust, employee-line manager relationship, employee's influence, employee's organisational trust, employees' perceptions of their own i-deals, empowerment, ethical culture, ethical leadership, ethical value internalisation, experienced ease-of-processing, extent that employees believe manager values their voice inputs, fear, felt guilt, felt obligation to the leader, felt responsibility for constructive change, felt uncertainty, flexible work role orientation, follower feeling trusted,</p>	<p>Marescaux et al. (2019), Martin et al. (2015), Martin & Harrison (2022), Matsunaga (2015), Mayes & Ganster (1988), Maynes & Podsakoff (2014), McClean et al. (2022) McClean et al. (2018), Mellahi et al. (2010), Mesdaghinia et al. (2022), Mo & Shi (2018), Morrison et al. (2011), Mowbray et al. (2022), Nelson & Proell (2018), Nelson et al. (2016), Newton et al. (2022), Ng et al. (2019), Ng & Feldman (2013, 2015a, 2015b), Ng et al. (2014), Ng & Lucianetti (2016, 2018), Ng et al. (2021), Ng et al. (2022), Ohana (2016), Park et al. (2022), Park & Nawakitphaitoon (2018), Parke et al. (2022), Paterson & Huang (2019), Peng et al. (2019), Premeaux & Bedeian (2003), Prince & Rao (2022), Proell et al. (2022), Prouska et al. (2023), Qin et al. (2014), Rafferty & Restubog (2011), Ren et al. (2022), Rohlfer et al. (2022), Röllman et al. (2021), Romney (2021), Rusbult et al. (1988),</p>
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Voicers	Individual employees (308 studies)	Moderators	<p>friendship, general self-efficacy, general self-efficacy beliefs at work, gratitude, group conscientiousness, group ethical voice efficacy, group voice, image threat, individual suffering, information resource, initial promotive / prohibitive voice, integrity identity, intention to leave (flight response), international justice, job competence, job-related strains (lowered satisfaction, reduced commitment), justice judgements, leader self-interested behaviour, leader voice expectation, leader's interest in exploration, leaders' empowering behaviour, learning goal orientation, anticipated regret for (not) engaging in voice, LMX, LMX differentiation, LMX quality, loyalty, manager voice solicitation, voice constructiveness, manager's effort involved in processing voice, manager's processing fluency, employee proactivity, managerial voice solicitation, meaning of work, moral disengagement, moral efficacy, moral potency, newcomer's prosocial motivation, normative commitment, OCB, organisation-based self-esteem, organisational attachment, organisational commitment, organisational concern, organisational identification, organisational justice, ostracism experience, other-focused climate, overall balance of happiness / unhappiness, peer-rated status, perceived agency (competence), perceived communion (group-oriented motivation), perceived family well-being, perceived negative / positive impact, perceived risk, perceived sacrifice commitment, perceived solicitation, perceived supervisor listening, perceived voice instrumentality, perceived voice opportunity, personal control, personal identification, personal influence, personal relative deprivation, personal sense of power, mood, prosocial motivation, psychological ownership, psychological safety, psychological standing, psychological uncertainty, psychosocial prosperity, quality work perceptions, rating discrepancy, relational ego depletion, relational identification, representational predicaments, self-focused climate, self-perceived status, self-serving cognition, severity of mistreatment, shame, social identification, social networking behaviour, status judgment, status within team, strain, subordinate psychological attachment / detachment to organisation, supervisor authoritarian leadership, supervisor's challenge / hinderance of appraisals of group voice, supervisor's information sharing (task-related, social-related), supervisor's perceptions of newcomers (agency; communion), supervisory dependence, team affective commitment, team identification, team innovation, team monitoring, threat, trust in organisation, trust in senior management, trust in supervisor, unhappiness about representational predicaments, use of implicit voice delivery, value congruence, vigour at work, voice (fight response / politics), voice constructiveness, voice efficacy, voice quality, voice related to profession / work unit, voice role conceptualisation, voice role perception, voice safety, voice self-efficacy, manager willingness to implement voice, work energy, workplace status.</p> <p>Adoption of individual / collective / multi performance-related pay practices, affective attachment to the organisation, ambiguity, avoidance-approach motivation, beliefs about management's support for whistleblowing, benevolent leadership, change intensity, coworker exchange, coaching, collectivistic organisational culture, commitment to organisation, conflict-avoiding (cultural value), continuance commitment, coworker abusive supervision, coworker helping and support, cultural intelligence, degree of leader consulting employee, differentiated</p>	<p>Satterstrom et al. (2021), Schreurs et al. (2020), Sessions et al. (2020), Sherf et al. (2021), Sherf et al. (2019), Sherf et al. (2017), Shin et al. (2022), Sijbom et al. (2015), Snell & Wong (2009), Spencer (1986), Stamper & Van Dyne (2001), Starzyk & Sonnentag (2019), Starzyk et al. (2018), Sun et al. (2019), Sun et al. (2022), Takeuchi et al. (2012), Tangirala et al. (2013), Tangirala & Ramanujam (2008, 2012), Tenhiälä & Lount (2013), Thiel et al. (2022), Thompson & Klotz (2022), Tröster & van Knippenberg (2012), Umeh et al. (2022), Urbach & Fay (2018), Van Dyne et al. (2008), Van Dyne & LePine (1998), Venkataramani et al. (2016), Walumbwa et al. (2012), Walumbwa & Schaubroek (2009), Wang et al. (2022), Wang et al. (2020), Wang et al. (2014), Wang et al. (2012), Ward et al. (2016), Wee & Fehr (2021), Wei et al. (2015), Weiss & Morrison (2019),</p>
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		<p>individual-focused transformational leadership, employee electronic monitoring, employee perceptions of supervisor openness, employee political skill, employee rank, employee's attachment styles (insecure / secure), employee's centrality in team friendship network, employee's current organisational tenure, employee's segmentation preference (segmentation of work / family roles), entity morality beliefs, feelings of alienation, follower's power distance orientation, gender, goal congruence, group performance, helping role perception, humble leadership, individualistic organisational culture, information sharing, interactional justice climate, intrinsic motivation, job autonomy, job control, job demands, job engagement, job security, job stability, leader 'originality' cognitive style, leader 'rule-governance' cognitive style, leader consultation, leader ethical voice, leader identification, leader perceived status threat, leader team-oriented accountability, leader unfairness, leader-follower value congruence, leader's centrality in team avoidance / friendship network, leader's positive implicit leadership, leader-leader exchange, LMX, LMX differentiation, LMX quality, LMX-direct leader and skip-level leader, LMX-employee and direct leader, LMX- employee and skip-level leader, long-term orientation, Machiavellian personality, manager's distributive justice, manager's gender, manager's positive mood, manager's procedural justice, manager's status within organisation, manager's transformational leadership, managerial disregard, managerial openness, managerial prevention / promotion regulatory focus, managerial voice solicitation, member-team dissimilarity in nationality, middle manager's collectivist orientation, moral attentiveness, moral identity symbolisation, near / far psychological distance, need for status, neuroticism, newcomers' political skill, organisational identification, organisational politics, organisational support for change, overall job satisfaction, participative decision making, perceived employee expertise, perceived employee power motive, perceived leader ethical conviction, perceived voice level in the work context, perceptions of coworkers receiving i-deals, person-organisation value fit, personal identification with leader, political skill, power distance, power distance orientation, preference for job mobility, preference for wide task boundaries, preferred work status, prior team productivity / safety performance, procedural justice climate, procedural justice perceptions, prohibitive / promotive voice role expectations, psychological entitlement, psychological safety, psychological safety in workgroup, psychological safety perceptions, reappraisal, relational attributions, relative hierarchical power, resource management ability, self-belief of influence at work, voice self-efficacy, self-monitoring, service climate, situational moderators, strategic silence by employees, supervisor listening, supervisor power motive, supervisor's ability to infer, supervisor's emotional support, supervisor's personal sense of power, supervisor's self-face concern, supervisory delegation, supportive leadership, team climate for innovation, team commitment, team compassion, team members' prior familiarity with one another, trait self-control, trust, uncertainty (nation-level), useful feedback from coworkers, voice efficacy, voice quality belief, voice role perception, voicer credibility, voicer politeness, work group voice climate, work satisfaction, work self-efficacy, workgroup moral identity symbolisation.</p>	<p>Willits & Franco-Watkins (2021), Withey & Cooper (1989), Wu et al. (2022), Xia et al. (2020), Xu et al. (2023), Xu et al. (2020), Xu et al. (2019), Yan et al. (2022), Yang et al. (2021), Zhang et al. (2023), Zhang et al. (2015), Zhao, Chen, & Liu (2022), Zhao, Lam, Zhu, & Zhao (2022), Zheng et al. (2022), Zheng et al. (2021), Zhou & George (2001), Zhou et al. (2022), Zhu et al. (2015)</p>
Voicers	Teams	<p>Independent variables</p> <p>Agreeableness, amount of information on project concerns, anonymous / identifiable partner, avoiding responses to relationship conflict, challenging / supportive voice, cognitive ability,</p>	<p>Ali et al. (2020), Babalola et al. (2021),</p>

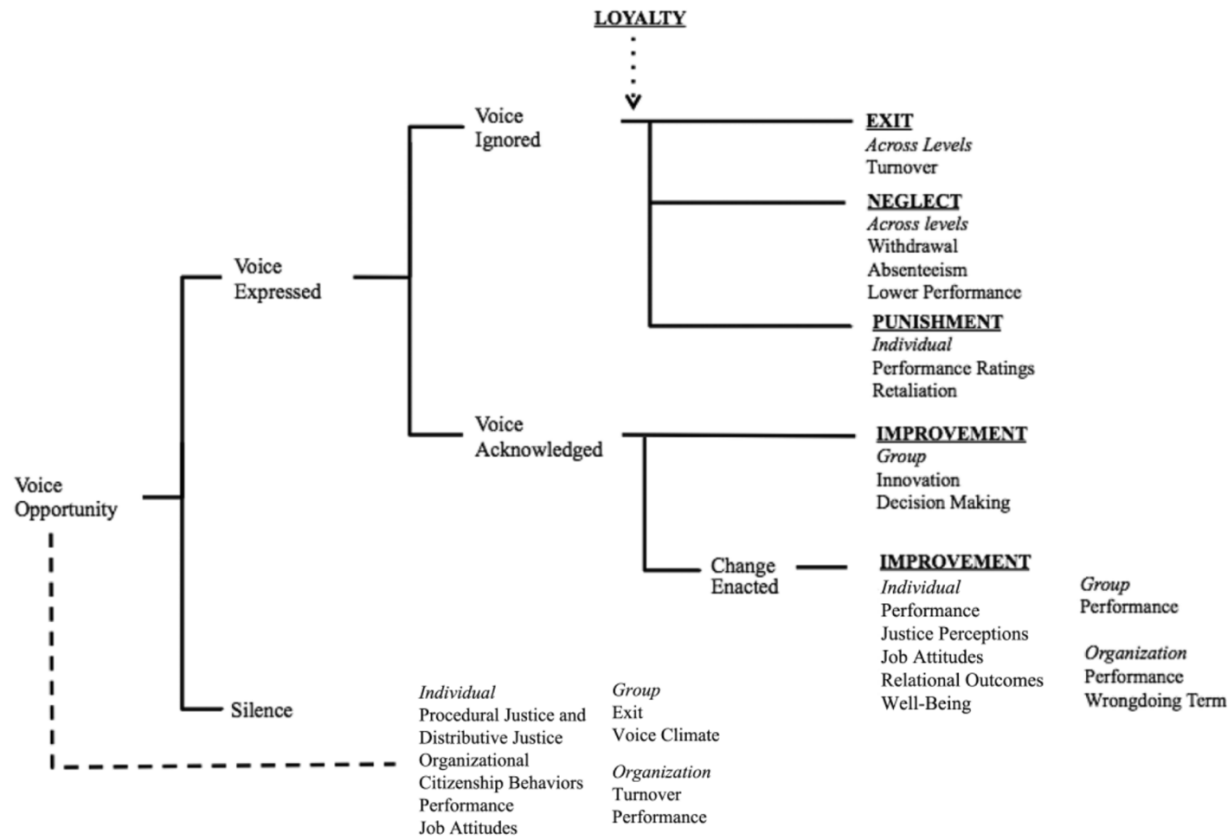
	(team members; team) (76 studies)		conscientiousness, contending and collaborating responses to relationship conflict, coworker's perception of the employee's poor voice quality, coworker voice climate, cultural distance, employee's maintenance of informal leadership, employee's situational learning orientation, expertise of voicer, explicit inclusive leader language, extraversion, global self-esteem, group ethical voice, group size, supervisor undermining, high / low belongingness needs, need for control, implicit inclusive leader language, impression management, individual-level abusive supervision, information redundancy, leader behavioural integrity, leader's prior acceptance / rejection of voice, level of leader Machiavellianism practised, LMX, lower-level manager's ethical leadership, male / female partner, managers' personal control, message framing, message solution present / absent, message solution presentation, neuroticism, organisational norms (speaking up norms vs. keeping quiet norms), overriding observed vs. predicted by beliefs, participative leadership, peer response to female / male voice / prohibitive / promotive voice, amplification, team-oriented leadership, perspective taking, positive counter-stereotypical voice - content & language/content only, prior performance, prohibitive / promotive ethical voice, proportion of group members engaging in voice, received respect, group satisfaction, management style, supportive organisational context, target's positive mood, team diversity faultlines, team leader coaching, team leader trait gratitude, team member prohibitive / promotive voice, team prohibitive / promotive voice, team-level abusive supervision, team-oriented leadership, timing of speaking up, top-manager's authentic leadership, trustworthiness of voicer, unethical pro-organisational behaviour, unit voice climate, upper-level manager's ethical leadership, voice timing, work-flow centrality.	Bain et al. (2021), Brykman & Maertz (2023), Burris (2012), Carnevale et al. (2020), Chen & Trevino (2022), D'Innocenzo et al. (2016), De Dreu et al. (2001), Edmondson (2003), Farh & Chen (2014), Feng et al. (2022), Frazier & Bowler (2015), Guo & Recalde (2022), Guzman & Espejo (2019), Hoogervorst et al (2013), Huang & Paterson (2017), Hussain et al. (2019), Khan et al. (2022), LePine & Van Dyne (2001), Li & Tangirala (2022), Li et al. (2021), Liang et al. (2019), Liu et al. (2015), McClean et al. (2022), McClean et al. (2018), McClean et al. (2013), Nelson et al. (2016), Ng et al. (2022), Ng et al. (2021), Ng et al. (2019), Ohana & Stinglhamber (2019), Peng et al. (2022), Peng & Wei (2020), Podsakoff et al. (2015), Sessions et al. (2020), Shepherd et al. (2019), Sherf et al. (2019), Stern et al. (2008), Venkataramani & Tangirala (2010), Wang et al. (2022),
Voicers	Teams (team members; team) (76 studies)	Dependent variables	Affective commitment toward team, amplifier's social status within a group, constructive voice, preventive voice, promotive voice, cooperative contextual performance, coworker verbal support, treatment errors, perceptions of group performance, performance, post-performance, speaking up by informal leader, supervisor emotional exhaustion, supervisor performance, task performance, team creativity, team effectiveness, team functioning, team innovation, team OCB toward each other, team supportive voice intentions, team-role performance, turnover intentions, voice solicitation, voicer's social status within a group, willingness to voice project concerns.	
Voicers	Teams (team members; team) (76 studies)	Mediators	Abusive supervision, actor's psychological safety with target, advice network centrality, boundary spanning in interdisciplinary action teams (IATs), constructive voice, control beliefs, coworker feelings of (moral) threat, coworker's judgment of the employee's incompetence, diffusion of responsibility, ease of speaking up in IATs, elevation, emotional exhaustion, employee felt obligation for constructive change, employee's benevolence, error engagement during disruptive phase of change, felt guilt, group voice climate, idea quality, independence climate, job competence, leader reflective moral attentiveness, leader-direct supervisor guanxi, liking of voicer, loyalty, member's organisation-based self-esteem, middle manager's authentic leadership, ostracism experience, peer-rated status, perceived agency (competence), perceived autonomy, perceived communion (group-oriented motivation), personal influence, positive	

			mood, prosocial motive of voicer, psychological empowerment, shared leadership, speaking up (potential action), supervisor's challenge / hindrance of appraisals of group voice, team identification, team informal communication, team knowledge utilization, leaders' humble behaviour, team member's willingness to discuss ideas with team, team reflexivity, team relationship conflict, threat, team-member exchange (TMX), unit empowerment, worry about consequences.	Weiss et al. (2018), Weiss & Morrison (2019), Whiting et al. (2012), Zheng et al. (2022)
Voicers	Teams (team members; team) (76 studies)	Moderators	Actor's lower status vis-à-vis the target, actor's relationship quality with target, change intensity, coworker voice, corporate ethical values, cultural intelligence, desire to help others / the organisation, friendship network centrality, gender, global self-esteem, group power, group size, innovation project stage, leader-group interaction frequency, leader's perception of team member guanxi, leader's voice solicitation, organisational support, LMX, long-term orientation, management team's (organisational leader) change orientation, middle manager's power distance orientation, peer-LMX, perceived levels of resource availability, perception of supervisor's managerial openness, professional group membership, satisfaction with the group, supervisor's personal sense of power, task performance, team creative efficacy, team implicit voice theory composition, team psychological safety, team-role performance, unit manager's access to organisational resources, unit manager's participation in decision making, work-group identification.	
Endorsers	Managers / supervisors (34 studies)	Independent variables	Promotive / prohibitive voice, uniform voice (promotive & prohibitive), daily level of depletion, employee's daily voice impulse control, positive counter-stereotypical voice (gender), positive counter-stereotypical voice (content & language), employee's other-face concern for supervisor, public / private voice, servant leadership, feasibility / desirability concerns, social distance, spatial distance, politely- / colloquially toned voice, importance of issue, application of voice tactics (public / private settings, formal / informal channels), voice directness, voicer politeness, voicer credibility, manager's ego depletion, supervisor power motives, employee identification (work unit / profession), voice content (importance, resources, and interdependencies), challenging / supportive voice, explanation specificity, explanation sensitivity.	Burris (2012), Burris et al. (2022), Isaakyan et al. (2021), King et al. (2019), Lam et al. (2022), Lam et al. (2019), Li et al. (2019), Liao et al. (2021), McClean et al. (2022), Schreurs et al. (2020), Urbach & Fay (2018), Xu et al. (2020)
		Dependent variables	Managerial voice endorsement, managerial daily voice endorsement, supervisor voice endorsement, level of applying formal and public voice tactics, success of voice, idea support from supervisor, managerial perception of value of voice, performance, voice intentions.	
		Mediators	Manager's processing fluency, alternative mechanisms, employee's daily promotive / prohibitive voice, employee's daily voice impulse control, employee's job competence, employee's benevolence, employee's use of implicit voice delivery, image threat, employee's promotive / prohibitive voice, experienced ease-of-processing, manager effort in processing voice, frequency of voice related to employee identification, attributed employee intentions (prosocial / egoistic), loyalty, threat, voice safety.	

		Moderators	Managerial promotion regulatory focus, managerial prevention regulatory focus, employee trait self-control, supervisor's self-face concern, supervisor's ability to infer, LMX, political skill, near / far psychological distance, perceived manager openness, perceived manager's positive mood, voicer politeness, voicer credibility, perceived employee expertise (high / low), perceived employee power motive.	
Individual employees (1 study)		Independent variables	Promotive ethical voice, prohibitive ethical voice.	Chen & Trevino (2022)
		Dependent variables	Coworker verbal support.	
		Mediators	Coworker feelings of moral threat / elevation.	
		Moderators	None.	
Teams (team members; teams; management teams) (5 studies)		Independent variables	Promotive ethical voice, prohibitive ethical voice, peer response to promotive / prohibitive voice, peer response to male / female voice, peer response.	Bain et al. (2021), Chen & Trevino (2022)
		Dependent variables	Team member verbal support, voicer's social status within a group.	
		Mediators	Team member feelings of threat, team member elevation, perceived idea quality.	
		Moderators	None.	
Implementers	Managers / supervisors (6 studies)	Independent variables	Voice content (importance, resources, and interdependencies), managerial self-efficacy, unit-level voice.	Burriss et al. (2017), Fast et al. (2014), McClellan et al. (2013), Satterstrom et al. (2021)
		Dependent variables	Implementation, managerial value / endorsement, solicitation / denigration of subordinate / willingness to implement voice, initial rejection and voice cultivation.	
		Mediators	Ego threat, self-affirmation.	
		Moderators	Unit manager access to organisational resources, unit manager participation in decision-making, management team's change orientation.	
Individual employees (1 study)		Independent variables	Voice (in)congruence.	Zhang et al. (2022)
		Dependent variables	Initiative in implementing constructive changes.	
		Mediators	Extent that employees believe their manager values their voice input.	
		Moderators	Voice quality belief.	
Teams (team members; team unit) (2 studies)		Independent variables	Team leader coaching, supportive organisational context for speaking up, initial rejection and cultivation.	Edmondson (2003), Satterstrom et al. (2021)
		Dependent variables	Implementation of new processes.	

		Mediators	Boundary spanning, ease of speaking up.	
		Moderators	None.	
	Management team (1 study)	Independent variables	Speaking up (unit-level).	McClellan et al. (2013)
		Dependent variables	Employee turnover (unit-level).	
		Mediators	None.	
		Moderators	Unit manager access to organisational resources, unit manager participation in decision-making, management team's change orientation.	
	Organisation (1 study)	Dependent variables	Implementation stages (materialising, piloting, formalising).	Satterstrom et al. (2021)
Allies	Team members (1 study)	Independent variables	Initial rejection and voice cultivation.	Satterstrom et al. (2021)
		Dependent variables	Idea implementation.	
		Mediators	None.	
		Moderators	None.	
Bystanders	Team members (3 studies)	Independent variables	Information redundancy.	Hussain et al. (2019)
		Dependent variables	Voice.	
		Mediators	Diffusion of responsibility.	
		Moderators	Peer-LMX.	
Solicitors	Managers / supervisors (12 studies)	Independent variables	Upward mobility of employees' social class, speaking up (volume), speaking up (constructive), LMX, managerial self-efficacy, manager personal control, manager's consultation of employee's ideas.	Carnevale et al. (2020), Fast et al. (2014), Martin & Harrison (2022), Park et al. (2022), Sherf et al. (2019), Tangirala & Ramanujam (2012)
		Dependent variables	Speaking up, employee job rewards, promotive voice, voice solicitation, improvement-oriented voice, solicitation / denigration of subordinate / willingness to implement voice.	
		Mediators	General self-efficacy, managerial voice solicitation, manager perceptions of employee proactivity, employee's felt obligation for constructive change, solicitation / denigration of subordinate / willingness to implement voice, ego-threat, self-affirmation, employee's perceived influence.	
		Moderators	Manager voice solicitation, coworker voice, long-term orientation, manager's status within organisation, employee's work self-efficacy, employee's overall job satisfaction.	

Appendix B: Voice, Exit, Neglect, Punishment, Improvement, Loyalty (VENPIL) progressive model of voice (Bashshur & Oc, 2015, p. 1547)



Interlude to Chapter 3

Chapter 2 presents findings from the narrative literature review, which highlight that voice is a socially embedded process shaped by the roles of other actors beyond the individual who speaks up, such as voice endorsers and voice implementers. These roles play a critical part in influencing both the trajectory and outcomes of voice, emphasising the importance of a shared social context.

Next, Chapter 3 contributes to deeper understanding of individual voice within group contexts in which voice occurs to extend insights into how group contextual factors shape individuals' decisions to speak up in group contexts. I examine how group dynamics, particularly information redundancy (the extent to which issues are commonly known within a team) and group diversity (the extent to which group members differ with respect to characteristics such as educational background, nationality, and professional experience; Apfelbaum et al., 2014) to examine their effects on promotive and prohibitive voice. I also tested the effects of information redundancy on promotive and prohibitive voice via two motivational pathways, that is, via diffusion of responsibility (perception that one is not solely responsible for speaking up and the responsibility is shared among the group; Latané & Nida, 1981) and voice self-efficacy (belief in one's capability to effectively express voice in a given context; Bandura, 1997), and the moderating role of group diversity. Chapter 3 offers new insights into how shared knowledge and group diversity influence different voice types which has important implications for group work contexts where team interdependence and knowledge sharing are critical. In doing so, I extend knowledge on the multi-contextual investigation of voice into group contexts.

Chapter 3: The group context of voice: The effects of information

redundancy on promotive and prohibitive voice and the moderating role of group diversity

Abstract

This study investigates how information redundancy (i.e., group members' shared awareness of issues) and group diversity influence promotive and prohibitive voice in a group setting. I conducted a vignette-based experiment study to investigate the influence that these group-level dynamics have on promotive and prohibitive voice through two mechanisms: diffusion of responsibility and voice self-efficacy, which maps onto the conceptualisation of voice as a proactive behaviour motivated by 'reason to' and 'can do' mechanisms, respectively. Drawing on this theoretical perspective, I found information redundancy significantly increased participants' sense of diffusion of responsibility, which in turn, reduced both voice types, providing support for the view that knowing that others also know about the same issues gave participants' less 'reason to' to engage in voice. Interestingly, the mediation influence of information redundancy on voice self-efficacy, as a 'can do' state, were more contingent when team members worked in more homogenous teams (i.e., low group diversity). However, in teams with greater diversity in characteristics such as age, professional background, and gender (heterogeneous teams), this same shared knowledge around issues led to lower confidence in voicing concerns and subsequently, reduced promotive and prohibitive voice. These results suggest that the perceived risk of speaking up is shaped by team diversity, where what feels safe in a homogenous group may feel riskier in a more diverse one. Overall, the findings indicate that in group contexts where issues are commonly known, employees' decisions to speak up are influenced by both 'reason to' and 'can do' motivations, as well as the diversity of the group. Practically, this study highlights

the importance of clarifying responsibility, building voice self-efficacy in diverse teams, and tailoring voice interventions to the group context.

Keywords: Information redundancy, diffusion of responsibility, voice self-efficacy, promotive / prohibitive voice, group diversity

1 Introduction

Voice is inherently risky behaviour, as employees who challenge the status quo may be perceived as critical of management (Morrison, 2014). They risk negative repercussions, such as losing the respect of coworkers, damaging relationships or even jeopardising their jobs (Detert & Treviño, 2010; Kish-Gephart et al., 2009; Milliken et al., 2003). Due to the interpersonal risks associated with voicing, reducing perceived risk through ‘safety in numbers’ can encourage voice (Morrison & Milliken, 2000). However, when individuals perceive that others in the group share similar concerns or are also likely to speak up, this sense of ‘safety in numbers’, can reduce the perceived personal risk of voicing. In such situations, individuals may feel less isolated and more supported, thereby legitimise concerns and encourage employees to speak up (Shepherd et al., 2019; Siemsen et al., 2009). This aligns with Morrison and Milliken’s (2000) argument that voice is more likely when the interpersonal risks are diffused across the group.

The conundrum, however, is that employees often hesitate to raise concerns with those higher in the organisational hierarchy, even when they know that others are aware of the same issues (known in the literature as ‘information redundancy’, Hussain et al., 2019). This is commonly described as the “elephant in the room” (Hussain et al., 2019, p. 828) phenomenon, where problems that are widely recognised remain publicly unaddressed. As a result, opportunities for improvement or the resolution of operational issues frequently go unspoken, referred to as ‘unspoken truths’, and rarely make their way upwards (Milliken et al., 2003). As argued by scholars, knowing that others in the organisation also share similar knowledge of an issue may create a sense of collective safety, thereby legitimise concerns and encourage employees to speak up (Shepherd et al., 2019; Siemsen et al., 2009).

Understanding when and why employees choose (or not) to raise potentially actionable issues, despite these issues being widely recognised within their teams, is an important question that has received limited empirical investigation. To my knowledge, there has been only one paper published seeking to empirically test the effects of information redundancy on voice behaviour. In this paper, Hussain et al. (2019) tested an explanation based on Diekmann's (1985) theories on the bystander effect and the volunteer's dilemma (Darley & Latané, 1968). The authors found that when information redundancy is high, that is, employees share knowledge about a work issue, individuals experience a diffusion of responsibility, viewing the obligation to act as shared among the group rather than feeling solely responsible to act (Bickman, 1971; Latané & Nida, 1981). In two experiments, Hussain and colleagues (2019) found support for the role of the diffusion of responsibility in reducing voice, operationalised broadly as "the upward expression of work-related suggestions, opinions, and concerns" (Hussain et al., 2019, p. 829).

In this study, I test an alternative theory regarding the impact of information redundancy on voice behaviour. Drawing on Parker et al.'s (2010) proactive motivational states framework, I argue that when employees experience diffusion of responsibility, defined as their perception that others are also aware of the same issues, these influences two motivational pathways. Firstly, when individuals feel less personally responsible and therefore less personally accountable to speak up and drive constructive change, this weakens their 'reason to' engage in voice behaviours. The 'reason to' motivational state includes various forms of internalised motivation. In this context, the focus is on identified motivation, where individuals are motivated to speak up because they perceive the act of voicing to be personally important and aligned with their values - they feel a sense of responsibility to initiate constructive change (Sheldon & Elliot, 1999; Strauss et al., 2012). When

responsibility is shared among many individuals who are aware of an issue, personal importance and accountability to take action decrease, leading to a lower likelihood of speaking up. Consequently, in situations of high information redundancy, employees often lack the motivation to accept personal responsibility for voicing concerns, especially if they do not internalise the importance of speaking up (identified motivation) or fail to connect this action to their sense of identity (integrated motivation) (Hussain et al., 2019).

According to Parker et al.'s (2010) proactive motivational states framework, the second key pathway is the 'can do' motivation. In the context of voice, voice self-efficacy refers to an individual's belief in their ability to effectively express their concerns in a given situation (Bandura, 1997). In addition to influencing the 'reason to' motivation, I propose that information redundancy also affects employees' 'can do' motivation. When employees recognise that others are aware of the same work-related issue, this shared knowledge can boost their confidence to speak up, enhancing their voice self-efficacy. For example, employees may feel more confident bringing up information that is commonly shared within their teams because they can cross-check its validity with their peers (e.g., Wittenbaum et al., 2004). Conversely, employees may hesitate to share uncommon opinions due to fear of being singled out for contradicting the dominant group perspective (e.g., Edmondson, 2003). In such cases, information redundancy can reduce perceived interpersonal risk and strengthen one's belief in their ability to act effectively – both are key aspects of the 'can do' motivational state. This view contrasts with interpretations of information redundancy as solely demotivating or passive (i.e., diffusion of responsibility), suggesting that information redundancy may not only inhibit voice but can also empower it.

In addition to the ‘can do’ motivational state alongside the ‘reason to’ state, I argue that the influence of information redundancy is also not uniformly enabling or inhibiting, as it might also depend on characteristics of the group context, particularly group diversity.

Group diversity introduces variability in how shared knowledge is processed and acted upon (Kavadias & Sommer, 2009; Thomas-Hunt et al., 2003). I propose that in highly homogeneous teams, information redundancy may strengthen the ‘safety in numbers’ effect and reinforce voice self-efficacy, as individuals anticipate alignment and support. Employees may be less wary of bringing up known issues as homogenous teams are likely to share common views. In contrast, in more diverse teams (e.g., age, professional background and gender), I propose that information redundancy might heighten uncertainty about others’ responses or reduce confidence in shared understanding, weakening the ‘can do’ motivation. Similarly, highly diverse teams may intensify diffusion of responsibility if individuals assume that others with differing perspectives are better positioned to act. Since their perception can weaken identified and integrated motivations, their ‘reason to’ act diminishes. Thus, diversity may function as a critical moderator of the motivational consequences of information redundancy, shaping both ‘reason to’ and ‘can do’ pathways in voice behaviour.

It is well-understood that voice carries interpersonal risk. However, promotive and prohibitive voice types represent different motivational orientations and perceived interpersonal risk (Liang et al., 2012). Promotive voice is typically seen as lower-risk and innovation-focused, whereas prohibitive voice is more socially sensitive and psychologically demanding due to its potentially confrontational nature. These differences can affect how employees interpret their capability (‘can do’) and responsibility (‘reason to’) to speak up. By examining promotive and prohibitive voice separately, the study can allow for a more

nuanced understanding of how proactive motivation translates into different types of voice behaviour, rather than assuming uniform effects across all voice expressions.

Therefore, the aim of this study is to investigate how information redundancy and group diversity influences promotive and prohibitive voice via the two proposed motivational pathways of ‘reason to’ (i.e., diffusion of responsibility) and ‘can do’ (i.e., voice self-efficacy).

This chapter makes three significant contributions to voice literature. First, I extend Hussain et al.’s (2019) research by testing a dual motivation-based mechanism based on Parker et al.’s (2010) theorisation of the important role of ‘can do’ and ‘reason to’ motivation states. Whilst Hussain and colleagues’ (2019) theorised role of diffusion of responsibility maps onto Parker and colleagues’ (2010) (lack of) ‘reason to’ pathway, the role of voice self-efficacy in mediating the effects of information redundancy on voice decisions has yet to be empirically tested. Although voice self-efficacy has been widely studied as a predictor of voice behaviour, drawing on social cognitive theory (e.g., Ng et al., 2021) and social learning theory (e.g., Wang et al., 2015), most research has focused on its outcomes rather than its antecedents. This study examines how information redundancy may shape employees’ sense of voice self-efficacy. In this way, this study responds to calls for more nuanced models of employee voice that account for multiple motivational pathways (e.g., Morrison, 2011; Tangirala & Ramanujam, 2008).

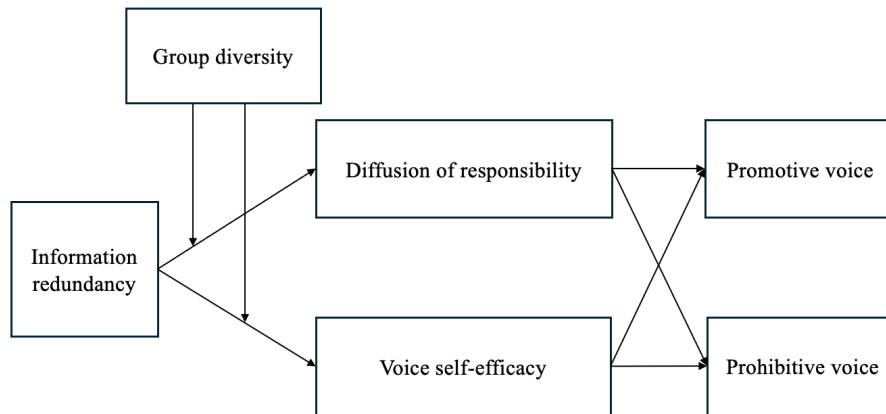
A second key contribution of this paper lies in examining group diversity as a potential moderator of the relationship between information redundancy and voice. While prior research has highlighted both the benefits and challenges of group diversity for team functioning and individual experience (Dahlin et al., 2005; Guillaume et al., 2017; Hatipoglu & Inelmen, 2018), its specific impact on employees’ willingness to speak up remains largely

unexplored. In particular, how group diversity interacts with information redundancy to shape the ‘reason to’ and ‘can do’ motivational pathways underlying voice behaviour has not been systematically investigated. This question is especially relevant in today’s diverse workplaces where overlapping information is also a common feature of group dynamics. By investigating the moderating role of group diversity, this study tests key assumptions about how team composition shapes voice behaviour, specifically, whether more homogeneous teams offer greater ‘safety in numbers’ and whether more diverse teams lead to greater ‘individuality in numbers’. In doing so, this study provides new insights into how the balance of similarity and difference among team members can influence employees’ willingness to speak up in contexts where information redundancy is high and/or low.

Finally, a third important contribution of this study is its investigation into how information redundancy and group diversity differentially influence promotive and prohibitive voice, given the distinct levels of interpersonal risk associated with each. Research suggests that employees are generally more confident in engaging in promotive voice (i.e., offering new ideas or suggestions to improve the status quo) than in prohibitive voice (i.e., speaking up about harmful or problematic practices) (Liang et al., 2012). Prohibitive voice is often perceived as riskier because it is more likely to be misinterpreted and it can provoke defensiveness or negative emotional reactions from those receiving the message (Liang et al., 2012). Given that prohibitive voice is associated with higher interpersonal risk, the buffering effect of low group diversity may be more pronounced for prohibitive voice than for promotive voice. However, potential differences in how information redundancy and group diversity interact to influence the ‘reason to’ and ‘can do’ motivational pathways in relation to promotive and prohibitive voice content remain empirically untested.

The figure below shows the integrative model to be tested in this study.

Figure 3.1: Theoretical model



2 Theoretical background and hypothesis development

This section develops the theoretical model presented in Figure 3.1 by examining how information redundancy and group diversity shape promotive and prohibitive voice through two key mechanisms: diffusion of responsibility and voice self-efficacy. Grounded in Parker et al.'s (2010) 'reason to' and 'can do' motivation states framework, the model specifies both direct and indirect effects, as well as conditional processes. According to Parker et al.'s (2010) proactive motivational states framework, the third motivational state – 'energised to' – refers to the role of activated positive affect (e.g., enthusiasm, excitement) in stimulating proactive behaviour. While this affective state can enhance general engagement and persistence, it is less suited to explaining why individuals choose to speak up in teams, particularly in contexts involving risk, responsibility, and perceived capability. Therefore, this study focuses on the 'can do' and 'reason to' states, which offer more task-specific and cognitively grounded insight into voice behaviour, especially in relation to voice self-efficacy and diffusion of responsibility.

2.1 Information redundancy, diffusion of responsibility and voice self-efficacy

Information redundancy arises when multiple employees encounter similar events or co-construct interpretations of these events through group discussions (Hussain et al., 2019). For instance, one source is the shared exposure to routine events in workplaces, where employees perform similar roles that lead employees to arrive at similar interpretations, such as waitstaff in a restaurant. These common experiences naturally foster overlapping viewpoints within the team and shared challenges often lead to common understandings about issues and problems. In collaborative and interdependent teams, members may have specialised roles but overlap in their knowledge and pursue shared goals (Tortoriello et al., 2012). Frequent communication and collaboration allow employees to learn about each other's challenges, pool insights and construct a collective perspective on work-related issues (Ashforth, 1985; Schneider & Reichers, 1983). In ambiguous or uncertain situations, employees engage in collective sense-making to interpret events (Stephens et al., 2020; Weick, 1993), which can generate overlapping knowledge. Over time, this process may form informational echo chambers that reinforce shared narratives and interpretations (Bessi, 2016; Levy & Razin, 2019).

2.1.1 Diffusion of responsibility

Employees who experience a strong 'reason to' speak up are typically those who recognise the importance of doing so and feel a personal responsibility to act (Parker et al., 2010). According to Parker et al.'s (2010) proactive motivational framework, the 'reason to' state reflects the internal justification for engaging in voice, based on personal values, perceived importance and a sense of accountability. However, in teams where information redundancy is high, where many members are aware of the same issue, this internal justification can become weakened. When employees perceive that others also know about

the problem, they may feel less individually responsible for raising it. This shared awareness can foster a mindset of ‘someone else with speak up’, thereby psychologically diffusing the sense of ownership and obligation (Darley & Latané, 1968). In such contexts, employees may interpret the presence of others and the group familiarity with the issue as cues that their personal action is less necessary, thereby undermining their individual motivation to voice concerns. Thus, information redundancy might erode ‘reason to’ motivation by diluting personal responsibility through information redundancy.

Additionally, when workplace issues are widely known, that is, when information redundancy is high, employees may not perceive the situation as sufficiently challenging or engaging to warrant proactive involvement. For example, according to self-determination theory (Deci & Ryan, 2000), stronger motivation is fostered when tasks satisfy basic psychological needs for competence, autonomy and relatedness. However, in a high information redundant group context, employees may not anticipate that speaking up will demonstrate competence, since others are already aware, nor feel a strong sense of autonomous responsibility, since responsibility is diffused across group members. As a result, employees may feel less compelled or obligated to take initiative, weakening their ‘reason to’ engage in voice.

Similar perspectives like the bystander effect have been used to understand the relationship between information redundancy and diffusion of responsibility and subsequently, their voice decisions (Hussain et al., 2019). The bystander effect refers to a psychological phenomenon where people are less likely to take action or speak up when others are present, because they assume someone else will do it (Darley & Latané, 1968). According to bystander theory, diffusion of responsibility operates as a social-cognitive mechanism that reduces perceived individual accountability through the internal processing

and rationalisation of external social cues (Latané & Nida, 1981). This perception reduces the psychological burden of inaction by enabling individuals to shift responsibility onto others (Fischer et al., 2006; Garcia et al., 2002). In contrast, when individuals perceive themselves as uniquely possessing relevant information, they are more likely to experience a heightened sense of personal responsibility for acting on it (Garcia et al., 2002). In organisational settings, this often unfolds informally, as employees infer others' awareness through extended conversations or meetings (Fayard & Weeks, 2007). In Parker et al.'s (2010) motivation-based framework, with observation and awareness-building over time, their 'reason to' act reduces especially toward the risky act of voicing. Therefore, I propose:

Hypothesis 1a: Information redundancy is positively related to diffusion of responsibility.

2.1.2 Voice self-efficacy

Parker et al.'s (2010) proactive motivation-based framework also considers the 'can do' motivational pathway. In the context of voice, voice self-efficacy refers to "the extent to which employees feel capable of speaking up" (Tangirala et al., 2013, p. 1043). Since voice often challenges the status quo and entails high psychological risk, confidence in one's ability is essential for action (Bindl & Parker, 2011; Morrison, 2014). Employees with high voice self-efficacy tend to believe they have sufficient expertise to speak up and ability to control and change a situation (Frese & Fay, 2001; McAllister et al., 2007). While leadership characteristics are well-established antecedents of voice self-efficacy at both individual (e.g., Bharanitharan et al., 2019; Wei et al., 2015; Yan et al., 2022) and group levels (e.g., Huang & Paterson, 2017), contextual and demographic factors should also be considered. For example, Eibl and colleagues (2020) found that in the male-dominated logistics sector, gender

influenced employees' general self-efficacy beliefs, which subsequently affected their voice behaviour. This relationship was further moderated by the presence of supportive leadership. Similarly, at the organisational level, perceived organisational support has been shown to foster voice self-efficacy by reducing fear and enabling confidence in speaking up (Duan et al., 2014).

In terms of the relationship between information redundancy and voice self-efficacy, arguably, employees can feel more confident about speaking up when the information is commonly shared within the team, as they can verify its accuracy through discussions with their peers (e.g., Wittenbaum et al., 2004). Indeed, by adopting a 'wisdom of crowds' mindset (Surowiecki, 2004), individuals may gain confidence in the validity of their concerns, assuming their views align with widely shared but unspoken truths within the group. In such cases, employees with high voice self-efficacy are more likely to believe their input is legitimate and worthwhile. This belief can reduce the perceived risks of speaking up (Eccles & Wigfield, 2002), as they expect their ideas to be acknowledged and treated with respect by managers (Walumbwa et al., 2011). Therefore, I propose that high levels of information redundancy should lead to higher levels of voice self-efficacy.

Hypothesis 1b: Information redundancy is positively related to voice self-efficacy.

2.2 Indirect effects of information redundancy on promotive and prohibitive voice

Promotive voice refers to the expression of ideas, suggestions, or proposals aimed at improving work processes, systems, or organisational functioning (Liang et al., 2012). It reflects a future-oriented, constructive form of voice that seeks to enhance performance and drive innovation. Importantly, the decision to engage in promotive voice is shaped by both

the perceived responsibility to speak up and the individual's confidence in their expertise and potential impact of their input. Prohibitive voice refers to the expression of concerns, warnings, or critiques intended to prevent harm or highlight threats to organisational effectiveness (Liang et al., 2012). Promotive and prohibitive voice differ in the degree of interpersonal risk they carry, which influences employees' motivation to engage in each. While promotive voice, focused on suggesting improvements, is generally perceived as more constructive and lower in risk, while prohibitive voice, aimed at highlighting problems or pointing out harmful practices, tends to be more contentious, confrontational or disruptive (Chamberlin et al., 2017; Morrison, 2023). This makes prohibitive voice more psychologically demanding, socially sensitive and potentially threatening to one's social image, especially in hierarchical or risk-averse environments where employees may fear backlash, being misunderstood, or being labelled negatively (Liang et al., 2012; Lin & Johnson, 2015).

In both cases, information redundancy within teams can lead to diffusion of responsibility, where employees assume that others, equally aware of the issue, will take action. This reduces the perceived personal necessity to speak up. For promotive voice, this might lessen the sense of ownership over an idea for change; for prohibitive voice, it may further compound the hesitation already present due to its riskier nature. Employees may perceive less personal accountability and diminished distinctiveness in speaking up, weakening their 'reason to' act (Parker et al., 2010). Moreover, because prohibitive voice may conflict with individuals' self-image or long-term identity goals, especially in careers where conformity is implicitly rewarded, it may feel misaligned with person–environment fit, further discouraging such behaviour (Carver & Scheier, 1998). Thus, while both forms of voice can be inhibited by diffusion of responsibility, the effect may be more pronounced for

prohibitive voice given its higher emotional and reputational stakes. Accordingly, I propose that diffusion of responsibility mediates the relationship between information redundancy and both promotive and prohibitive voice:

Hypothesis 2a: Diffusion of responsibility negatively mediates the relationship between information redundancy and promotive voice, such that higher information redundancy leads to greater diffusion of responsibility, which in turn reduces promotive voice.

Hypothesis 2b: Diffusion of responsibility negatively mediates the relationship between information redundancy and prohibitive voice, such that higher information redundancy leads to greater diffusion of responsibility, which in turn reduces prohibitive voice.

In terms of the mediating role of voice self-efficacy, as I argued above, when employees perceive that work-related issues are widely recognised within their team, they are more likely to feel confident in the accuracy and legitimacy of their observations. This sense of common knowledge and understanding, or ‘wisdom of crowds’ (Surowiecki, 2004), reinforces voice self-efficacy by signalling alignment with group norms and reducing the likelihood of negative social consequences. Therefore, high information redundancy helps create a context in which employees anticipate that their input will be well-received, thus lowering the perceived cost and risk of speaking up (Eccles & Wigfield, 2002; Walumbwa et al., 2011). This is particularly important for promotive voice, which involves proposing improvements or constructive changes. Employees who feel capable of influencing decisions are more likely to initiate voice, persist through resistance and frame their suggestions persuasively (Krueger & Dickson, 1994; Lyons & Bandura, 2019). These behaviours are reinforced through a cycle of experience and learning, including small wins, feedback and

reflection build confidence over time (Grant & Ashford, 2008; King et al., 2019; Weick, 1984).

At the same time, voice self-efficacy is also critical for enabling prohibitive voice, which involves pointing out risks, concerns or problematic practices. Given its more confrontational and politically sensitive nature, prohibitive voice not only demands confidence in the message but also in the employee's ability to navigate potential interpersonal and organisational fallout (Bharanitharan et al., 2019). In these cases, employees must believe they can withstand pushback, challenge authority appropriately and still be taken seriously. Such confidence is often harder to develop in environments where role models for constructive dissent are absent and opportunities for vicarious learning are limited (Bandura, 1977; Ng et al., 2021).

Therefore, while voice self-efficacy facilitates both promotive and prohibitive voice, it may be even more essential in the latter due to its higher interpersonal risk. Although both promotive and prohibitive voice have prosocial intentions (Van Dyne & LePine, 1998), they differ in their risk levels and consequences. Promotive voice expresses novel ideas and forward-thinking solutions, often associated with opportunity, innovation and positive affect (Liao et al., 2021). In contrast, prohibitive voice draws attention to problems or risks, often eliciting defensiveness or discomfort (Liang et al., 2012). In consideration of these distinctions, prohibitive voice is more susceptible to motivational factors, including high diffusion of responsibility and low voice self-efficacy, respectively (Parker et al., 2010; Prince & Rao, 2022). Empirical studies support these distinctions. For example, Wei et al. (2015) found that voice self-efficacy mediated the effects of power distance on individual promotive and prohibitive voice behaviour, suggesting differential mechanisms based on voice type. Similarly, Bharanitharan et al. (2019) found that leader humility had a stronger

positive effect on challenging voice (i.e., voice aimed at promoting adaptive change) than on defensive voice (i.e., voice aimed at resisting change), and that this effect was mediated by employees' voice self-efficacy.

In both cases, information redundancy can serve to validate group members' observations and lower perceived threats associated with voicing known issues. Accordingly, I propose that voice self-efficacy mediates the positive relationship between information redundancy and both promotive and prohibitive voice.

Hypothesis 3a: Voice self-efficacy positively mediates the relationship between information redundancy and promotive voice, such that higher information redundancy enhances voice self-efficacy, which in turn increases promotive voice.

Hypothesis 3b: Voice self-efficacy positively mediates the relationship between information redundancy and prohibitive voice, such that higher information redundancy enhances voice self-efficacy, which in turn increases prohibitive voice.

2.3 Moderating effect of group diversity

Group diversity, encompassing differences in educational background, nationality and professional experience, has long been conceptualised as a 'double-edged sword' in organisational research (Horwitz & Horwitz, 2007). While diversity enhances innovation, decision-making quality and access to a broad range of knowledge (Cox & Blake, 1991; Guillaume et al., 2017), it can also introduce challenges such as subgroup divisions, reduced cohesion and heightened interpersonal conflict (Bunderson & Sutcliffe, 2002; Jehn et al., 1999). These social faultlines may disrupt communication and make it more difficult to form

shared mental models, thereby influencing how team members interpret and act upon workplace issues.

In more homogeneous teams, members often share similar experiences and perspectives, which can foster greater interaction, mutual validation and ease of communication (Bowen & Blackmon, 2003; Byrne, 1971). In such group contexts, information redundancy tends to reinforce the assumption that concerns are commonly recognised and validated which can amplified the influence of information redundancy on voice self-efficacy through a ‘wisdom of crowds’ effect (Surowiecki, 2004), where individuals feel assured that their perspectives align with group consensus and will be well-received. However, through a different pathway, group homogeneity could also strengthen the effects of information redundancy on diffusion of responsibility and reducing the perceived need to speak up. In homogenous groups, group members may feel their contribution is redundant or unnecessary, further weakening the ‘reason to’ voice.

In contrast, diverse groups often bring more novel and divergent views to the table (Dahlin et al., 2005), making group members’ input feel more unique and less substitutable. Therefore, high group diversity could weaken the relationship between information redundancy and diffusion of responsibility, as group members perceive their perspectives as less likely to be echoed by others. However, the same diversity can also undermine voice self-efficacy. When group members feel quite different to other group members, due to visible or functional-based differences, they may anticipate resistance or misinterpretation, particularly if social categorisation leads to in-group / out-group dynamics (van Knippenberg & Mell, 2016). As a result, even when issues are known in the group, the psychological assurance necessary to speak up may falter (Bandura, 1997; Nemeth & Staw, 1989).

Moreover, when distinguishing between promotive and prohibitive voice, while promotive voice focuses on suggesting improvements and tends to be more positively received, prohibitive voice involves flagging problems or risks and is inherently more confrontational and socially sensitive (Bharanitharan et al., 2019). In diverse teams, group members may feel especially vulnerable when engaging in prohibitive voice, as they are more likely to anticipate disagreement or backlash, particularly if their concerns diverge from dominant norms. Consequently, the motivational pathways that support prohibitive voice, especially those involving voice self-efficacy and diffusion of responsibility, are more susceptible to disruption under high diversity.

Therefore, I propose that group diversity moderates the effects of information redundancy on both diffusion of responsibility and voice self-efficacy. In homogeneous groups, information redundancy may more strongly contribute to diffusion of responsibility, weakening both promotive and prohibitive voice through reduced personal accountability. In diverse groups, however, the confidence-enhancing effect of information redundancy via voice self-efficacy may be diminished, especially for prohibitive voice, where interpersonal risks are higher and peer validation is less assured.

Integrating these insights, I argue that the indirect effects of information redundancy on voice behaviour, through both diffusion of responsibility and voice self-efficacy, are moderated by group diversity. Specifically, the weakening effect of diffusion of responsibility is more pronounced in homogeneous teams, while the undermining of voice self-efficacy is more acute in diverse teams. Moreover, given the heightened interpersonal and political risks of prohibitive voice, the moderating effects of group diversity are expected to be stronger for prohibitive voice than for promotive voice. Thus, I propose:

Hypothesis 4a: Group diversity moderates the relationship between information redundancy and diffusion of responsibility, such that the positive relationship is weaker at higher levels of group diversity.

Hypothesis 4b: Group diversity moderates the relationship between information redundancy and voice self-efficacy, such that the positive relationship is weaker at higher levels of group diversity.

Integrating these arguments, I propose that diffusion of responsibility mediates both the main effects of information redundancy and the interactive effects of information redundancy and group diversity on promotive and prohibitive voice.

Hypothesis 5a: Group diversity moderates the indirect effect of information redundancy on promotive voice via diffusion of responsibility, such that the indirect effect is weaker at higher levels of diversity.

Hypothesis 5b: Group diversity moderates the indirect effect of information redundancy on promotive voice via voice self-efficacy, such that the indirect effect is weaker at higher levels of diversity.

Hypothesis 6a: Group diversity moderates the indirect effect of information redundancy on prohibitive voice via diffusion of responsibility, such that the indirect effect is weaker at higher levels of diversity.

Hypothesis 6b: Group diversity moderates the indirect effect of information redundancy on prohibitive voice via voice self-efficacy, such that the indirect effect is weaker at higher levels of diversity.

3 Methods

3.1 Study design

A vignette-based scenario experiment was employed to test the hypotheses, manipulating independent variables through controlled scenarios to enhance experimental realism and internal validity (Hussain et al., 2019; Ng et al., 2021). This design enabled examination of the effects of information redundancy on promotive and prohibitive voice behaviour, which are difficult to quantify in naturally occurring teams where issues are often complex and multifaceted (Isaakyan et al., 2021). This approach was particularly suited to investigating information redundancy and diffusion of responsibility, as it ensured participants' responses reflected their perceptions of responsibility without being confounded by real-time workplace dynamics (Brykman & Maerz, 2023). By using standardised, simulated workplace scenarios, variability in participants' interpretations was minimised, allowing for more reliable assessment of diffusion of responsibility, voice self-efficacy and voice behaviours related to a single issue.

To be eligible for the study, participants were required to be employed either full-time or part-time in a formal organisation (i.e., not self-employed). This inclusion criterion ensured that participants had sufficient experience working in teams to understand and engage with the workplace scenario credibly (Park et al., 2022).

3.2 Sample

A total of 310 participants were recruited through Prolific Academic online survey research platform. Prolific Academic and other similar platforms (e.g., Amazon MTurk) have been used in numerous voice studies (e.g., Bain et al., 2021; Lam et al., 2022; Ng et al., 2021) to investigate voice phenomenon since these platforms have been shown to deliver honest, high-quality data (Burriss et al., 2022). The survey included a university-approved informed

consent form, followed by screening questions, experimental manipulations, attention checks, research measures and demographic items (e.g., gender, age, work experience, employment type and educational qualifications).

Participants were pre-screened to ensure they were employed either part-time or full-time in a formal organisation. Six participants who failed attention checks (Oppenheimer et al., 2009) were excluded from analysis. The final sample comprised 304 participants. Each participant was compensated at £9.00 GBP per hour, in accordance with Prolific's fair pay standards (Prolific Academic, 2025).

Of the 304 participants, 161 identified as female (53.0%), 140 as male (46.1%), one participant (.3%) identified outside of the male/female binary and two participants (.7%) declined to answer. The majority ($n = 134$, 44.1%) were aged 18–30 years, 117 participants (38.5%) were aged 31–40 years and 53 participants (17.4%) were aged 41 years or older. Most participants had over 11 years of work experience ($n = 109$, 35.9%), followed by 105 participants (34.5%) with 1–5 years, 83 participants (27.3%) with 6–10 years and seven participants (2.3%) with less than one year. These demographic categories were grouped to preserve anonymity (Weiss et al., 2023).

Most participants ($n = 237$, 78.0%) were employed full-time, while 66 participants (21.7%) were employed part-time and one participant declined to report employment status. Regarding education, 189 participants (62.2%) held a bachelor's degree, 60 participants (19.7%) a master's degree, five participants (1.6%) a doctoral or philosophy degree and 50 participants (16.4%) held other qualifications.

3.3 Procedures

Upon providing informed consent, participants were randomly assigned to one of four experimental conditions in a 2 (information redundancy: low vs. high) \times 2 (team diversity:

low vs. high) between-subjects design. Participants read a scenario in which they adopted the role of a full-time employee at a mobile game development company, Adventure Inc., working as a technician responsible for testing games prior to release.

The scenario described that participants worked closely with five teammates on a new mobile game, which the organisation hoped would restore its leading market position. Their manager, Sam, was preparing to release the game. However, participants were informed that they believed the game had unresolved issues, such as instability and frequent crashes on certain devices. Given this, participants were asked to decide whether to voice their concerns to Sam and suggest delaying the game's release.

To accommodate the experimental design, the independent variables were coded dichotomously: information redundancy (0 = low, 1 = high) and team diversity (0 = low, 1 = high) (Willits & Franco-Watkins, 2021). Ethics approval was obtained from the Human Research Ethics Committee at The University of Sydney (Project ID: 2024/HE000374). All data are stored in encrypted files on the University's enterprise edition of OneDrive, with access restricted to the researcher(s) only.

3.3.1 Information redundancy

Following Hussain et al. (2019), information redundancy was manipulated by varying the extent to which participants believed their teammates were aware of the game's issues. In the high (vs. low) information redundancy condition, participants read: "Most of your colleagues are also fully aware (vs. completely unaware) of the problems with the game and about their severity. That is, most of them have very similar (vs. very different) information and knowledge that you have on this issue, and you are not the only person (vs. one of the only people) on your team who knows about the issue."

3.3.2 Group diversity

Group diversity was manipulated following Homan and Greer (2013). In the high (vs. low) diversity condition, participants read: “Your team members are very diverse (vs. members are very similar) in terms of age, professional background, and gender.”

3.4 Measures

3.4.1 Promotive voice

Promotive voice was measured using five items adapted from Liang et al.’s (2012) Promotive Voice Scale (refer to Appendix B for full comparison). Participants rated how likely they were to speak up to Sam about improving the game. Items included “I would proactively develop and make suggestions for another new mobile game with Sam.” “I would proactively suggest new games to Sam that account for similar issues.” “I would raise suggestions to improve game designs with Sam that account for similar issues.” “I would proactively voice out constructive suggestions that help Sam release the game on time.” “I would make constructive suggestions to proactively improve the current game with Sam.” Responses were recorded on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

3.4.2 Prohibitive voice

Prohibitive voice was measured using five items adapted from Liang et al.’s (2012) Prohibitive Voice Scale (refer to Appendix B for full comparison). Items included “I would advise Sam to delay the release of the game and its issues.” “I would speak up honestly to Sam about delaying the release of the game and its issues, although when dissenting opinions exist.” “I would voice out my own thoughts to Sam about delaying the release of the game, although it might embarrass Sam.” “I would point out issues to Sam about the game, although it might hamper my relationship with Sam.” “I would proactively report the issues to Sam.”

Responses were recorded on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

3.4.3 Diffusion of responsibility

Diffusion of responsibility was measured using five items adapted from Hussain et al. (2019). Items included “I would feel that it was up to me to bring up the issue with Sam.” (reverse-coded) “I would feel that bringing up the issue is my responsibility.” (reverse-coded) “I would feel that it was personally my responsibility to share concerns with Sam.” (reverse-coded) “I would feel that my team members would bring up the issue with Sam.” “I would feel that my team members have responsibility for speaking up about the issue to the Sam.” Responses were rated on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree).

3.4.4 Voice self-efficacy

Voice self-efficacy was assessed using three items adapted from Tangirala et al. (2013). Items included “I would feel confident about my ability to voice concerns about task-related issues to my manager.” “I would feel self-assured about my capabilities to speak up on work-related issues to my manager.” “I feel like I have mastered the skills necessary to speak up to my manager.” Responses were measured on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree).

3.4.5 Manipulation checks

To assess the effectiveness of the manipulation for team diversity, perceived team diversity was measured using the item: “How diverse is the team in the scenario in terms of age, gender, and professional background?” These items were rated on a 5-point scale from 1 (not diverse at all) to 5 (extremely diverse). To assess the effectiveness of the manipulation for information redundancy, perceived information redundancy was measured using the item:

“How aware were team members about the issues with the mobile game?” These items were rated on a 5-point scale from 1 (not aware at all) to 5 (extremely aware).

4 Results

4.1 Manipulation checks

An independent samples *t*-test was conducted to compare perceived group diversity between the two experimental scenarios. Levene’s Test for Equality of Variances indicated that the assumption of equal variances was violated ($F(1, 302) = 85.609, p < .001$). Therefore, the *t*-test results assuming unequal variances were reported. The results showed a significant difference in perceived diversity between the conditions, $t(227.843) = -24.950, p < .001$. The mean difference in perceived diversity scores was -2.293 ($SE = .092, 95\% CI = [-2.474, -2.112]$). These results indicate that the mean differences across the groups on the manipulation check items were in the expected direction.

To ensure the robustness of these findings, a bootstrapped independent samples *t*-test was conducted with 1,000 bootstrap samples and Bias-Corrected and Accelerated (BCa) confidence intervals. The bootstrapped analysis confirmed the significant difference in perceived diversity, with a mean difference of -2.293 (Bias = .003, $SE = .094, 95\% BCa CI: -2.477$ to -2.109). The bootstrapped *p*-value was $< .001$, further supporting the results of the traditional *t*-test.

A separate independent samples *t*-test was conducted to compare participants’ perceptions of team members’ awareness of the mobile game issues between the two information redundancy conditions. Levene’s Test for Equality of Variances indicated that the assumption of equal variances was met, $F(1, 302) = 3.075, p = .081$, so equal variances were assumed. The results showed a significant difference in perceived awareness between the

conditions, $t(302) = -39.300, p < .001$. The mean difference in awareness scores was -3.184 ($SE = .081, 95\% CI [-3.344, -3.025]$). These results indicate that the mean differences across the groups on the manipulation check items were in the expected direction.

A bootstrapped t -test with 1,000 bootstrap samples and Bias-Corrected and Accelerated (BCa) confidence intervals confirmed this significant difference, yielding a mean difference of -3.184 (Bias = $-.003, SE = .081, 95\% BCa CI = [-3.344, -3.028]$). The bootstrapped p -value was $< .001$, reinforcing the results of the standard t -test.

4.2 Construct validity

4.2.1 Confirmatory factor analysis

A series of confirmatory factor analyses (CFAs) were conducted to evaluate the factorial validity of the adapted voice behaviour measures. Four models were tested: a one-factor model, a two-factor model (combining promotive and prohibitive voice, and combining diffusion of responsibility and voice self-efficacy), a three-factor model (combining promotive and prohibitive voice), and a baseline four-factor model representing promotive voice, prohibitive voice, diffusion of responsibility, and voice self-efficacy as distinct constructs.

Model fit indices for each solution are presented in Table 3.1. The baseline four-factor model demonstrated the best fit to the data: $\chi^2(129) = 476.312, p < .001; CFI = .822; TLI = .789; RMSEA = .096; SRMR = .082$. Although the fit indices did not meet conventional thresholds for excellent fit (e.g., $CFI \geq .95, RMSEA \leq .06$), they were substantially better than those of the alternative models, supporting the distinctiveness of the four constructs.

In contrast, the one-factor model showed poor fit: $\chi^2(135) = 1078.638, CFI = .516, TLI = .452, RMSEA = .154, SRMR = .115$. The two-factor and three-factor models also demonstrated inadequate fit, with CFI values below $.75$ and RMSEA values above $.10$. These

results suggest that collapsing promotive and prohibitive voice into a single factor does not adequately represent the data structure.

Table 3.1: Confirmatory factor analysis results

Model	χ^2	df	CFI	TLI	RMSEA	SRMR
One-Factor	1078.638	135	.516	.452	.154	.115
Two-Factor (combining promotive and prohibitive voice; combining diffusion of responsibility and voice self-efficacy)	977.627	134	.567	.506	.147	.111
Three-Factor (combining promotive and prohibitive voice)	642.447	132	.738	.697	.115	.096
Base line model	476.312	129	.822	.789	.096	.082

Abbreviation: χ^2 , chi-square test statistic; df, degrees of freedom; CFI, comparative fit index; TLI, Tucker-Lewis index; RMSEA, root mean square error of approximation; SRMR, standardised root mean square residual.

4.2.2 Promotive and prohibitive voice measures

The adapted items demonstrated acceptable internal consistency reliability, with Cronbach's alpha values of .734 for promotive voice and .778 for prohibitive voice. These values are comparable to those reported in prior research using the original scale. While Cronbach's alpha does not directly assess construct validity, the close alignment in item wording with the original measure, along with the observed reliability coefficients, suggests that the adapted items function in a manner consistent with theoretical expectations.

4.3 Descriptive statistics, standard deviations and correlations

Table 3.2: Descriptive statistics, standard deviations and correlations

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1 Information redundancy	.50	.50											
2 Group diversity	.50	.50	.06	--									
3 Diffusion of responsibility	2.79	.56	.41**	.02	(.59)								
4 Voice self-efficacy	4.11	.70	-.01	-.01	-.29**	(.85)							
5 Promotive voice	3.93	.61	.04	.03	-.20**	.40**	(.73)						
6 Prohibitive voice	4.09	.62	-.02	.03	-.27**	.35**	.34**	(.78)					
7 Gender ^a	1.56	.54	.01	.00	.04	-.05	.02	.06	--				
8 Age ^b	1.73	.74	-.04	-.01	-.13*	.13*	.03	.01	.00	--			
9 Work experience ^c	2.97	.89	-.04	.02	-.07	.13*	-.05	.03	-.02	.72**	--		
10 Contract (PT / FT) ^d	1.79	.43	.02	-.06	-.06	.10	.07	.00	.04	.11*	.13*	--	
11 Study qualification ^e	1.56	.54	.04	.04	.00	.01	-.02	.04	.02	.10	.08	-.13*	--

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

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

Abbreviations: *M*, mean; *SD*, standard deviation.

Sample size = 304

^a 1 = Male, 2 = Female, 3 = Cannot be described, 4 = Declined.

^b 1 = 18 to 30 years, 2 = 31 to 40 years, 3 = 41 & above years.

^c 1 = Less than 1 year, 2 = 1 to 5 years, 3 = 6 to 10 years, 4 = 11 & above years.

^d 1 = Part-time, 2 = Full-time, 3 = Declined.

^e 1 = Bachelor's degree, 2 = Master's degree, 3 = Philosophy degree, 4 = Others.

Table 3.2 presents the means, standard deviations, and correlations among the study variables. The correlation matrix provided initial support for the hypothesised relationships, particularly for the mediating role of diffusion of responsibility and the direct effects of voice self-efficacy on voice behaviours. Information redundancy was positively correlated with diffusion of responsibility. In turn, diffusion of responsibility was negatively associated with both promotive voice ($r = -.199, p < .01$) and prohibitive voice ($r = -.268, p < .01$), with a stronger negative correlation observed for prohibitive voice. Voice self-efficacy was positively associated with both promotive voice ($r = .395, p < .01$) and prohibitive voice ($r = .351, p < .01$), with a stronger positive correlation for promotive voice. Group diversity did not significantly correlate with any of the other variables.

4.4 Hypothesis testing

To examine the hypothesised relationships, linear regression analyses and Hayes' (2022) PROCESS macro for SPSS were employed. Bootstrapped confidence intervals were calculated using 5,000 iterations. This method, consistent with recommendations by Preacher et al. (2007), was chosen for its robustness in assessing indirect effects and its appropriateness for generalising to broader populations (Brykman & Maerz, 2023).

Table 3.3: Summary of path coefficients from direct path analyses

Outcome		Unstandardised <i>B</i>	Coefficients <i>SE</i>	Standardised coefficients	<i>t</i>	<i>p</i>
Diffusion of responsibility	(Constant)	2.561	.041	—	61.843	<.001
	Information redundancy	.452	.059	.406	7.723	<.001
Voice self-efficacy	(Constant)	4.114	.057	—	72.371	<.001
	Information redundancy	-.009	.080	-.006	-.109	.913
Promotive voice	(Constant)	3.904	.049	—	79.009	<.001
	Information redundancy	.045	.070	.037	.645	.519
	(Constant)	4.533	.175	—	25.919	<.001
	Diffusion of responsibility	-.217	.062	-.199	-3.535	<.001
	(Constant)	2.515	.192	—	13.122	<.001
	Voice self-efficacy	.343	.046	.395	7.466	<.001
Prohibitive voice	(Constant)	4.102	.051	—	81.006	<.001
	Information redundancy	-.019	.072	-.016	-.271	.787
	(Constant)	4.926	.176	—	27.971	<.001
	Diffusion of responsibility	-.299	.062	-.268	-4.828	<.001
	(Constant)	2.806	.200	—	14.025	<.001
	Voice self-efficacy	.313	.048	.351	6.520	<.001

Abbreviation: *SE*, standard error.

Table 3.4: Multiple regression analysis of indirect paths

	Promotive voice					Prohibitive voice				
	Unstandardised <i>B</i>	Coefficients <i>SE</i>	Standardised coefficients	<i>t</i>	<i>p</i>	Unstandardised <i>B</i>	Coefficients <i>SE</i>	Standardised coefficients	<i>t</i>	<i>p</i>
Intercept	2.987	.304		9.821	<.001	3.635	.314		11.586	<.001
Diffusion of responsibility	-.147	.066	-.135	-2.215	.028	-.239	.068	-.214	-3.496	<.001
Voice self-efficacy	.311	.049	.358	6.398	<.001	.263	.050	.295	5.237	<.001
Information redundancy	.103	.095	.085	1.080	.281	.044	.098	.036	.451	.652
Group diversity	.028	.091	.023	.308	.758	-.003	.094	-.002	-.029	.977
IR * GD	.018	.129	.013	.140	.889	.089	.134	.063	.666	.506
R ²	.172					.160				
ΔR ²	.172					.160				

Abbreviations: *B*, coefficient; *SE*, standard error.

Table 3.5: Summary of indirect effects for mediation (Bootstrap resampling N = 5,000)

Independent variable	Mediator	Outcome: Promotive voice				Outcome: Prohibitive voice			
		Indirect effect	95% CI			Indirect effect	95% CI		
			BootSE	BootLLCI	BootULCI		BootSE	BootLLCI	BootULCI
Information redundancy	Diffusion of responsibility	-.066	.036	-.142	-.001	-.108	.036	-.183	-.039
	Voice self-efficacy	-.003	.025	-.053	.046	-.002	.021	-.046	.040
	Total	-.069	.045	-.160	.015	-.110	.042	-.195	-.030

Abbreviations: CI, confidence interval; SE, standard error; LL, lower limit; UL, upper limit.

Table 3.6: Summary of moderation for information redundancy and group diversity on voice self-efficacy (Bootstrap resampling N = 5,000)

Independent variable	Moderator: Group diversity	Outcome: Voice self-efficacy					
		Indirect effect	<i>t</i>	<i>p</i>	95% CI		
					BootSE	BootLLCI	BootULCI
Information redundancy	Low	.171	1.512	.132	.113	-.052	.393
	High	-.190	-1.670	.096	.114	-.414	.034

Abbreviations: LL, lower limit; UL, upper limit. Interaction Term: $b = -.361$, $SE = .160$, $p = .025$.

Table 3.7: Summary of conditional indirect effects for moderated mediation with group diversity (Bootstrap resampling N = 5,000)

Independent variable	Mediator	Moderator: Group diversity	Outcome: Promotive voice				Outcome: Prohibitive voice			
			Indirect effect	95% CI			Indirect effect	95% CI		
				Boot SE	Boot LLCI	Boot ULCI		Boot SE	Boot LLCI	Boot ULCI
Information redundancy	Diffusion of responsibility	Low	-.059	.033	-.127	-.002	-.096	.037	-.176	-.033
		High	-.074	.040	-.159	-.002	-.121	.043	-.208	-.046
		IMM	-.015	.020	-.063	.020	-.025	.030	-.088	.033
	Voice self-efficacy	Low	.053	.035	-.014	.124	.044	.031	-.011	.112
		High	-.059	.037	-.138	.010	-.049	.031	-.116	.010
		IMM	-.112	.051	-.215	-.016	-.093	.044	-.187	-.014

Abbreviations: CI, confidence interval; SE, standard error; LL, lower limit; UL, upper limit.

Table 3.8: Summary of Monte Carlo Tests comparing indirect effects of information redundancy on promotive and prohibitive voice (Bootstrap resampling N = 5,000)

Pathway	Voice type	Indirect effect	BootSE	Boot LLCI	Boot ULCI	Difference (Δ)	Δ Boot LLCI	Δ Boot ULCI
Via diffusion of responsibility	Prohibitive	-.108	.036	-.183	-.039	-.042	-.142	.057
	Promotive	-.066	.036	-.142	-.001			
Via voice self-efficacy	Prohibitive	-.002	.021	-.046	.040	.000	-.064	.065
	Promotive	-.003	.025	-.053	.046			

Abbreviations: CI, confidence interval; SE, standard error; LL, lower limit; UL, upper limit.

Table 3.9: Summary of Monte Carlo Tests comparing indirect effects of information redundancy on promotive and prohibitive voice at high group diversity (Bootstrap resampling N = 5,000)

Pathway	Voice type	Indirect effect	BootSE	Boot LLCI	Boot ULCI	Difference (Δ)	Δ Boot LLCI	Δ Boot ULCI
Via diffusion of responsibility	Prohibitive	-.096	.037	-.176	-.033	-.037	-.134	.059
	Promotive	-.059	.033	-.127	-.002			
Via voice self-efficacy	Prohibitive	.044	.031	-.011	.112	-.009	-.101	.084
	Promotive	.053	.035	-.014	.124			

Abbreviations: CI, confidence interval; SE, standard error; LL, lower limit; UL, upper limit.

Table 3.3 shows the findings of direct paths examined in the model. Regression analyses were conducted to examine the direct effects. The results indicated that information redundancy significantly predicted diffusion of responsibility ($b = .452, p < .001$), providing support for Hypothesis 1a. In contrast, the direct effect of information redundancy on voice self-efficacy was not statistically significant ($b = -.009, ns$), thus, Hypothesis 1b is not supported.

Table 3.4 shows the findings of multiple regression analysis of indirect paths consisting of both parallel mediators in the model. Results indicate that for promotive voice, the model was significant, $R^2 = .17, F(5,298) = 12.38, p < .001$. Voice self-efficacy was a significant positive predictor ($\beta = .36, t = 6.40, p < .001$), and diffusion of responsibility was a significant negative predictor ($\beta = -.14, t = -2.22, p = .028$). Information redundancy, group diversity, and the interaction term were not significant. For prohibitive voice, the model was also significant, $R^2 = .16, F(5,298) = 11.35, p < .001$. Diffusion of responsibility ($\beta = -.21, t = -3.50, p < .001$) and voice self-efficacy ($\beta = .30, t = 5.24, p < .001$) were significant predictors. Other predictors were not significant.

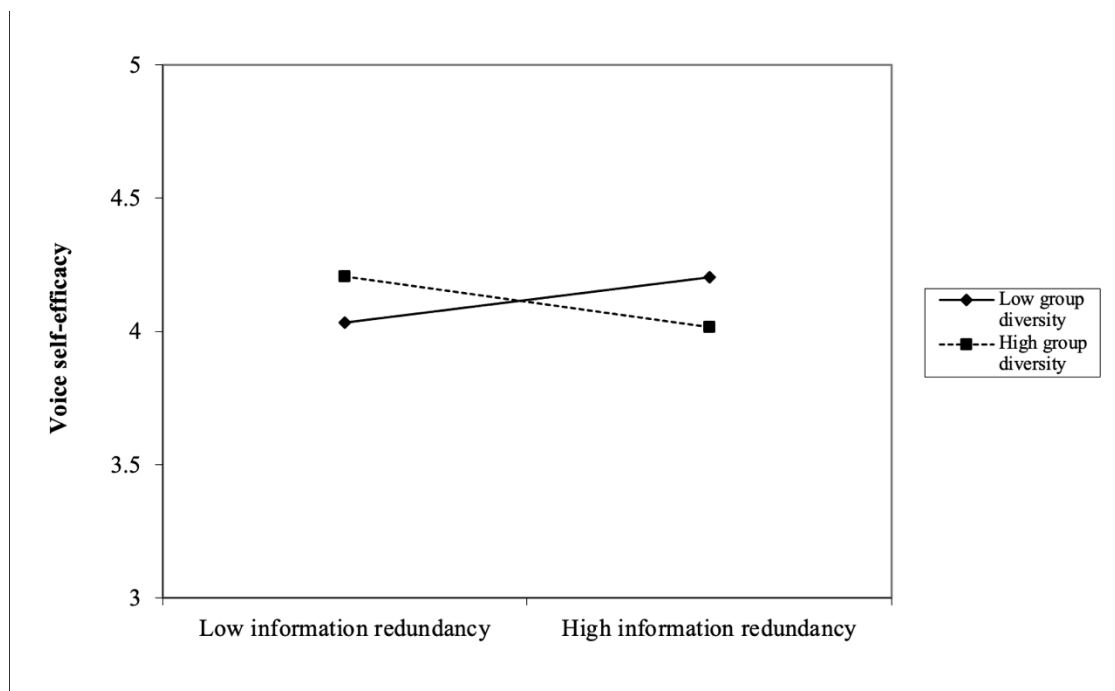
Table 3.5 shows the findings of indirect paths examined in the model. Hayes' (2022) PROCESS Model 4 was employed to test mediation effects. For promotive voice, Hypothesis 2a was supported, showing a significant indirect effect of information redundancy via diffusion of responsibility ($B = -.066, \text{BootSE} = .036, 95\% \text{ CI } [-.142, -.001]$). However, Hypothesis 3a was not supported, as the indirect effect via voice self-efficacy was non-significant ($B = -.003, \text{BootSE} = .025, 95\% \text{ CI } [-.053, .046]$). For prohibitive voice, Hypothesis 2b was supported with a significant indirect effect via diffusion of responsibility ($B = -.108, \text{BootSE} = .036, 95\% \text{ CI } [-.183, -.039]$), whereas Hypothesis 3b was not

supported due to a non-significant indirect effect via voice self-efficacy ($B = -.002$, $\text{BootSE} = .021$, 95% CI $[-.046, .040]$).

Table 3.6 shows the findings of moderation of information redundancy and group diversity on voice self-efficacy examined in the model. Figure 2 show the findings for moderation path with voice self-efficacy examined in the model. Hayes' (2022) PROCESS Model 1 was used to test for moderation effects. Hypothesis 4a, which proposed that group diversity moderates the relationship between information redundancy and diffusion of responsibility, was not supported, as the interaction term was not significant ($B = .105$, *ns*). Hypothesis 4b predicted that group diversity moderates the relationship between information redundancy and voice self-efficacy. The moderation analysis using PROCESS Model 1 indicated that group diversity significantly moderated the relationship between information redundancy and voice self-efficacy, as evidenced by a statistically significant interaction term ($B = -.361$, $p = .032$) (See Figure 3.2). However, the simple slopes of information redundancy on voice self-efficacy were not statistically significant at either low or high levels of group diversity. At low diversity, the effect was positive ($B = .171$, $SE = .113$, $t = 1.512$, $p = .132$, 95% CI $[-.052, .393]$), while at high diversity, the effect was negative ($B = -.190$, $SE = .114$, $t = -1.670$, $p = .096$, 95% CI $[-.414, .034]$). This pattern suggests that although the interaction between information redundancy and group diversity significantly influences voice self-efficacy overall, the specific conditional effects at high and low levels of diversity were not individually strong enough to reach statistical significance. In other words, while group diversity does affect the relationship, its influence may be modest or context-dependent, warranting further investigation. The findings provide partial support for Hypothesis 4b, as the presence of a significant interaction indicates a moderating effect even though the simple slopes were not significant at the tested levels.

Table 3.7 shows the findings of moderated mediation paths examined in the model. Hayes' (2022) PROCESS Model 7 was used to test moderated mediation. For promotive voice, Hypothesis 5a was not supported, since the indirect effect via diffusion of responsibility was significant at both low diversity ($B = -.059$, $\text{BootSE} = .033$, 95% CI $[-.127, -.002]$) and high diversity ($B = -.074$, $\text{BootSE} = .040$, 95% CI $[-.159, -.002]$) but the index of moderated mediation was not statistically significant (Index = $-.015$, $\text{BootSE} = .020$, 95% CI $[-.063, .020]$). However, Hypothesis 5b was supported, since the indirect effect via voice self-efficacy was positive at low diversity ($B = .053$, $\text{BootSE} = .035$, 95% CI $[-.014, .124]$) and negative at high diversity ($B = -.059$, $\text{BootSE} = .037$, 95% CI $[-.138, .010]$) and there was a significant index of moderated mediation (Index = $-.112$, $\text{BootSE} = .051$, 95% CI $[-.215, -.016]$).

Figure 3.2: Moderation effect of group diversity on information redundancy and voice self-efficacy



For prohibitive voice, Hypothesis 6a was not supported, since the indirect effect via diffusion of responsibility was significant at both low diversity ($B = -.096$, $\text{BootSE} = .037$, 95% CI $[-.176, -.033]$) and high diversity ($B = -.121$, $\text{BootSE} = .043$, 95% CI $[-.208, -.046]$), and the index of moderated mediation was not significant (Index = $-.025$, $\text{BootSE} = .030$, 95% CI $[-.088, .033]$). However, Hypothesis 6b was supported, since the indirect effect via voice self-efficacy was positive at low diversity ($B = .044$, $\text{BootSE} = .031$, 95% CI $[-.011, .112]$) and negative at high diversity ($B = -.049$, $\text{BootSE} = .031$, 95% CI $[-.115, .010]$), with a significant index of moderated mediation (Index = $-.093$, $\text{BootSE} = .044$, 95% CI $[-.186, -.014]$).

Hayes' (2022) PROCESS Model 7 was used to test first-stage moderated mediation, where the effect of information redundancy on voice self-efficacy is contingent upon group diversity, and voice self-efficacy in turn predicts promotive and prohibitive voice. Even though the indirect effects at specific levels of diversity are not statistically significant, this significant index of moderated mediation indicates that the difference between those effects is itself significant. This implies that the strength of the mediation depends on the level of group diversity and thus, the moderated mediation is supported.

Taken together, these results suggest that group diversity significantly moderated the indirect effects of information redundancy on both promotive and prohibitive voice via voice self-efficacy, but not via diffusion of responsibility.

Additional exploratory analysis was conducted to examine whether there were significant differences between the effects on promotive and prohibitive voice. Table 3.8 shows a comparison of indirect effects of information redundancy on promotive and prohibitive voice. Monte Carlo simulations were used to compare the strength of indirect effects. The results showed that there were no significant differences between the mediation

effects of diffusion of responsibility on information redundancy on prohibitive voice and promotive voice ($\Delta = -.042$, 95% CI $[-.142, .057]$). Similarly, the results showed that there were no significant differences between the mediation effects of voice self-efficacy on the relationships between information redundancy on prohibitive voice and promotive voice ($\Delta = .000$, 95% CI $[-.064, .065]$). Table 3.9 presents Monte Carlo tests comparing indirect effects at high group diversity. The results showed that there were no significant differences between the moderated mediation effects of diffusion of responsibility on information redundancy on prohibitive voice and promotive voice ($\Delta = -.037$, 95% CI $[-.134, .059]$). Similarly, the results showed that there were no significant differences between the moderated mediation effects of voice self-efficacy on the relationships between information redundancy on prohibitive voice and promotive voice ($\Delta = -.009$, 95% CI $[-.101, .084]$).

5 General discussion

This study set out to examine how information redundancy within groups influences promotive and prohibitive voice behaviour, focusing on the mediating roles of diffusion of responsibility and voice self-efficacy, and the moderating role of group diversity. Drawing on Parker et al.'s (2010) proactive motivational states framework, this study sheds light on how group context and dynamics shape employees' promotive and prohibitive voice decisions via 'reason to' and 'can do' motivation states of diffusion of responsibility and voice self-efficacy, respectively.

5.1 Summary of key findings

The study yielded several noteworthy insights. First, consistent with Hypothesis 1a, information redundancy significantly increased diffusion of responsibility. This suggests that when employees perceive others to be aware of the same issues, they feel less personally

responsible to speak up. However, Hypothesis 1b was not supported; information redundancy did not significantly reduce voice self-efficacy. This indicates that overlapping knowledge alone may not diminish employees' confidence to speak up. While Parker et al.'s (2010) 'can do' motivational states framework posits that an information-rich environment can undermine self-perceptions of self-efficacy, it is possible that in diverse groups, information redundancy reinforces perceived expertise and shared understanding, making employees feel more competent to speak up.

The mediation results offered partial support for the theorised indirect effects. Supporting Hypotheses 2a and 3a, information redundancy had significant indirect effects on both promotive and prohibitive voice via diffusion of responsibility. However, Hypotheses 2b and 3b, which predicted indirect effects through voice self-efficacy, were not supported. These pathways were non-significant for both voice types. This distinction highlights that in contexts of high information redundancy, attributional judgments and perceptions of shared responsibility play a more dominant role than internal efficacy beliefs in shaping voice decisions. I reason that information redundancy may not have clearly influenced self-perceived capability to speak up in the experimental context. Alternatively, participants may have drawn on prior experiences or internalised role expectations when forming their voice self-efficacy judgments, rather than the informational context provided.

Regarding the moderation hypotheses, Hypothesis 4a was not supported. Group diversity did not significantly moderate the relationship between information redundancy and diffusion of responsibility. I reason that diffusion of responsibility is a relatively immediate or socially normative process that may occur regardless of group composition. When redundant information is present, individuals may assume others are aware and responsible, regardless of whether those others are similar or diverse, because such diffusion stems from cognitive

shortcuts rather than identity-based cues. In contrast, Hypothesis 4b was supported. A significant interaction effect indicated that, at high levels of group diversity, information redundancy was associated with decreased voice self-efficacy. This suggests that group diversity more reliably influences the development of ‘can do’ states (voice self-efficacy) than ‘reason to’ states (diffusion of responsibility). Moreover, the direction of the relationship reverses across levels of diversity. In more homogeneous teams, information redundancy appeared to enhance employees’ perceived confidence to speak up, whereas in more diverse teams, information redundancy may undermine such confidence.

The moderated mediation results revealed a more nuanced pattern. For promotive voice, the indirect effect of information redundancy via diffusion of responsibility was significant at both low and high diversity levels, but the index of moderated mediation was not significant. Thus, Hypothesis 5a was not supported. I reason that the scenario may have lacked strong cues for moral urgency or risk, which are often necessary to activate the psychological discomfort associated with diffusion of responsibility (Fischer et al., 2006). Without these cues, individuals may experience a relatively stable sense of shared responsibility across conditions, weakening any moderating influence of group diversity. In contrast, the indirect effect via voice self-efficacy was positive at low diversity and negative at high diversity, with a significant index of moderated mediation, supporting Hypothesis 5b. This suggests that group diversity meaningfully shapes the confidence individuals feel in their ability to voice.

For prohibitive voice, both indirect effects via diffusion of responsibility and voice self-efficacy were significant at high diversity levels. However, only voice self-efficacy yielded a significant index of moderated mediation, supporting Hypothesis 6b, but not 6a. These findings suggest that in high-risk voice situations, especially within complex and

diverse teams, employees' willingness to speak up is more strongly influenced by their voice self-efficacy than by diffusion of responsibility. Together, the results suggest that 'can do' motivation plays a more central role in high-risk voice contexts than 'reason to' motivation, especially under conditions of high group diversity, where the social stakes of speaking up may feel amplified.

Results from the exploratory analysis of differential mediation effects between prohibitive and promotive voice showed no significant differences between voice types. Monte Carlo simulations indicated that although the effects were descriptively stronger for prohibitive voice, the statistical differences were not significant. I reason that while voice types differ conceptually, the 'reason to' and 'can do' mechanisms linking shared awareness to speaking up may still operate similarly across both types. Future research might examine additional moderating variables (e.g., issue severity, personal responsibility cues) to better distinguish when these voice pathways diverge.

Similarly, results from the exploratory analysis of differential moderated mediation effects between prohibitive and promotive voice showed no significant differences between voice types. I reason that another plausible explanation for these null findings may lie in statistical limitations, such as insufficient statistical power or overlapping confidence intervals, rather than in theoretical inadequacy. It is also possible that the manipulation of group diversity was not strongly perceived or internalised by participants. If participants did not cognitively register the salience of diversity in the scenario, the theorised amplification of its moderating role on prohibitive voice may not have materialised.

5.2 Theoretical implications

This study makes three key theoretical contributions to the voice literature. It foregrounds information redundancy as a less explored context of voice, offers a dual-

pathway explanation involving ‘reason to’ and ‘can do’ proactive motivational states, identifies group diversity as a boundary condition and advances a differentiated understanding of promotive and prohibitive voice decisions.

First, it advances the growing literature on voice by investigating the underexplored effects of information redundancy on individual decisions to speak up in group contexts. While prior voice literature focuses on psychological safety (Edmondson, 1999), leadership styles (Detert & Burris, 2007) or relational dynamics (Morrison, 2011), less attention has been given to how shared awareness of issues shapes employees’ decisions to speak up with distinguishable types of voice content. This study shows that when employees know others are similarly aware of an issue, their experience in this context shapes their individual proactive motivational states to express different voice content. This opens a new pathway for theorising the informational preconditions under which voice is likely to be expressed, differing by its content (Liang et al., 2012).

Second, the study extends Parker et al.’s (2010) proactive motivational states framework by demonstrating that voice self-efficacy, as a ‘can do’ motivational state, plays a pivotal role in shaping employees’ decisions to speak up particularly in diverse group contexts. While diffusion of responsibility, a ‘reason to’ motivational state, mediates the relationship between information redundancy and promotive and prohibitive voice, its effect remains unaffected by group diversity. In contrast, voice self-efficacy is significantly moderated by group diversity, revealing that employees’ confidence in their ability to voice concerns is not merely an individual trait or leader-driven outcome (Eccles & Wigfield, 2002; Walumbwa et al., 2011), but a context-sensitive psychological resource. The findings show that social composition within teams can either amplify or erode employees’ belief in their capacity to contribute meaningfully, depending on perceived alignment or dissonance with

peers. In diverse groups, employees may feel more empowered to speak up when they perceive their perspectives as unique and valued, or conversely, may hesitate if they sense their views are misaligned or marginalised. Importantly, the results suggest that 'can do' motivation may override 'reason to' motivation in driving promotive and prohibitive voice behaviour. Even when diffusion of responsibility discourages action, high voice self-efficacy, especially in supportive or diverse environments, can counteract passivity and encourage proactive communication. This highlights the need for voice theories to account for interpersonal and contextual influences on self-efficacy beliefs, and positions voice self-efficacy as a dynamic construct that bridges individual agency and social context..

Third, the study contributes to the meso-level voice literature by integrating contextual variables into a multilevel framework. It demonstrates how group diversity moderates the psychological consequences of information redundancy (e.g., Bell et al., 2011; Bowen & Blackmon, 2003; Hatipoglu & Inelmen, 2018). Considering the conflicts that arise from diverse groups, this study provides alternative insight into how carefully balanced levels of diversity may be more beneficial to increase employees' voice self-efficacy where overlapping information may be widespread. While group diversity has been theorised to enhance performance via informational richness, it can also lead to social categorisation, reduced cohesion or interpretive misalignment (van Knippenberg et al., 2004). This study shows that information redundancy strengthens voice self-efficacy in homogeneous groups but weakens it in diverse groups. This reversal effect challenges overly positive assumptions about the impact of group diversity on voice and suggests that in diverse groups, informational overlap may not yield psychological safety or confidence. The findings highlighting the role of group composition in shaping motivational states and responses to shared information.

5.3 Practical implications

This study offers several practical implications for human resource management and organisational leaders aiming to foster voice behaviour within teams. While information redundancy is not a new phenomenon, particularly in collaborative work environments, it remains a pervasive and under-recognised barrier to voice. As this study highlights, employees' willingness to speak up under such conditions may fluctuate. Some may feel emboldened to challenge the status quo, while others may withdraw from voicing altogether. Engaging in either promotive or prohibitive voice involves a significant psychological burden and amid rising levels of workplace stress and complexity, it is crucial that organisations proactively address the contexts that shape employees' motivations for speaking up.

One practical implication concerns the need for clearer ownership of voice responsibilities within teams. Managers should be cautious of reinforcing a passive culture through excessive repetition or informal updates that assume shared awareness. Instead, organisations can establish explicit structures that assign responsibility for raising concerns. These could include rotating team roles, structured feedback forums or named 'voice advocates' to ensure issues are not assumed to be another coworkers' responsibility. Managers can also clarify expectations by clearly delineating task-specific responsibilities to reduce ambiguity and weaken the diffusion of responsibility. Open-door policies and transparent escalation procedures further reinforce a culture where voice is seen as an individual duty rather than a shared assumption.

Second, by fostering environments where diverse perspectives are acknowledged and valued, managers can strengthen employees' belief in their ability to contribute meaningfully. This includes encouraging inclusive dialogue, recognizing unique contributions, and signalling that all voices are welcome. These practices can help build voice self-efficacy,

particularly in teams where employees may otherwise hesitate to speak up due to perceived misalignment or marginalisation. Managers should keep in mind that diversity is not restricted to one type, for instance, demographic diversity (e.g., gender, education, or functional background) that matters, but how employees perceive the diversity and inclusiveness of their group at a broader scale.

Third, human resource management should ensure balanced diversity levels within teams to encourage employees to feel sufficiently confident to speak up. Organisations are increasingly pushing for diversity within workplaces today, demonstrating an all-embracing organisational culture alongside an increasing trend towards teamwork (Syed, 2020), but there is a need to moderate this. Leaders should be aware that diverse teams may not automatically mitigate diffusion of responsibility. Especially in more diverse teams, managers could emphasise validity of employees' ideas, foster safe environments for employees to offer constructive suggestions or implement more skill-building programs that increase employees' confidence to speak up. According to a United Nations report, more women are entering the workforce and claiming high-level positions (United Nations, 2015). Furthermore, a major demographic trend in the twenty-first century is the rapidly aging world population (United Nations, 2001) and older employees extend their time in the workforce while working alongside younger generations (Greene, 2015). Initiatives like Goldman Sachs' STEP Leadership Development program target black African and black Caribbean employees to 'Succeed, Transform, Excel and Perform' in their roles, encouraging these minority groups to resolve issues they deal with in the workplace. It is important to note that growing the diversity of the workforce is insufficient, and instead, commitment to diversity, inclusivity and supportive culture is fundamental to sustaining a healthy work environment (Dutton, 2018).

Ultimately, promoting different types of voice content in diverse and interdependent teams requires more than structural representation; it demands sustained commitment to psychological safety, cultural inclusivity and capability-building. Human resource professionals and team leaders alike must move beyond generic diversity strategies to foster tailored, psychologically enabling environments where all employees, regardless of background, feel confident, responsible and equipped to speak up.

5.4 Limitations and future directions

I acknowledge that this study is not without limitations. First, the use of scenario-based experimental methods may limit ecological validity, and the findings should be interpreted with caution in terms of their external validity (Brykman & Maerz, 2023). Although significant attempts have been made to create realistic scenarios, information redundancy can be interpreted very differently in real-world workplaces depending on the nature or severity of the issue being addressed. For instance, responses to project-related issues may have heavier psychological burdens than more routine matters, such as replacing a broken shared office desk that is often used for team meetings. Future research should seek to replicate these mechanisms in real-world organisational settings and explore how different issue types and perceived severity influence promotive and prohibitive behaviour in group contexts. Case studies involving identifiable workplace issues could also offer valuable insights into how promotive and prohibitive voice behaviour differs across varying group dynamics.

Second, this study examined group (Guillaume et al., 2017) and experiential diversity (e.g., work experience, educational background; Ilmakunnas & Ilmakunnas, 2011). However, participants may interpret these dimensions differently and some diversity cues in the vignette, such as educational background or experience, may not resonate strongly

enough with participants to influence their perceptions of responsibility or redundancy. Future research could examine group diversity in more disaggregated forms, including cognitive diversity (e.g., learning styles, personality types), informational diversity (e.g., task-relevant knowledge; Meyer & Schermuly, 2012) and cultural diversity (e.g., language, communication styles; Groves & Feyerherm, 2011). To enhance the rigour of the experimental methodology, future studies could employ more immersive techniques, such as providing photos of hypothetical situations and detailed descriptions of individual group members within the scenario.

Lastly, this study focused on peer-level group members, although more consideration of other significantly influential members, particularly leaders, would provide more nuanced insights. The role of informal or formal leaders may meaningfully shape an individual's willingness to assume responsibility and speak up. It would be particularly valuable to examine how a leader may influence the decisions for a member to accept the responsibility to intervene before they know how to intervene. Given that voice behaviour is often directed at those in positions of authority who can enact change, future research should examine leader-related factors such as leadership style, responsiveness and openness to voice (Brykman & Maerz, 2023). Such variables could offer more nuanced insight into the interplay between group context and upward communication.

Despite these limitations, this study opens promising avenues for future inquiry into promotive and prohibitive voice behaviour based on Parker et al.'s (2010) proactive motivational states framework, with the 'energised to' state, for instance. This theoretical integration remains relatively new in the voice literature (Hussain et al., 2019) and offers fertile ground for investigating other mechanisms, such as social influence, perceived

audience inhibition or diffusion of personal accountability (Latané & Darley, 1981), which may serve as important contextual conditions influencing voice in group settings.

The findings from the study in this chapter highlight how voice decisions are shaped by both information redundancy and group diversity. However, in contemporary workplaces, voice is increasingly expressed beyond internal groups, such as public, digital platforms that reach wide audiences. Having examined how group dynamics, particularly information redundancy and group diversity, influence individual promotive and prohibitive voice behaviour in the group context of voice, Chapter 3 has addressed research question 2. I now turn to examining the organisational and digital context of voice to address research question 3 in Chapter 4. In the following chapter, I focus on examining how organisational-level voice expressed through digital platforms (e-voice) influences organisational outcomes, such as employee satisfaction, positive word of mouth and organisational performance.

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Appendix

Appendix A: Participant Survey

Demographic Questionnaire

1. What gender do you identify as?
 - a. Male
 - b. Female
 - c. My gender cannot be described by the first 2 options.
2. What is your age in years?
 - a. 18 to 30
 - b. 31 to 40
 - c. 41 & above
3. What is your work experience in years?
 - a. Less than 1
 - b. 1 to 3
 - c. 4 to 6
 - d. 7 & above
4. Do you work part-time or full-time contract?
 - a. Part-time
 - b. Full-time
5. What is your study qualification?
 - a. Bachelor's degree
 - b. Master's degree
 - c. Philosophy degree
 - d. Others (please indicate) <TEXT>
6. Are you in a supervisory role?
 - a. Yes
 - b. No

Vignettes (Information redundancy (Hussain et al., 2019) X Diversity (Meyer & Schermuly, 2012)):

On the next pages, you will be asked some questions about the person in the scenario. Please read the scenario carefully and answer as honestly as you can.

Scenario 1: High information redundancy X High diversity

You are a full-time employee working at a mobile game development company, Adventure Inc., in the role of a technician who tests games before they are launched. You work closely in a team with five other people that had designed a promising new mobile game, which members of the organisation hoped would help Adventure Inc. regain its leading market position.

Your team members are **very diverse** in terms of age, professional background, and gender. Your manager, Sam, was planning the release of the game to the market.

However, you, as a team member, felt that the game had a few issues—such as being unstable and prone to crashing on certain devices. Most of your colleagues are also **fully aware** of the problems with the game and about their severity. That is, most of them have the

very similar information and knowledge that you have on this issue, and you are **not the only person** on your team who knows about the issue.

Scenario 2: Low information redundancy X Low diversity

You are a full-time employee working at a mobile game development company, Adventure Inc., in the role of a technician who tests games before they are launched. You work closely in a team with five other people that had designed a promising new mobile game, which members of the organisation hoped would help Adventure Inc. regain its leading market position.

Your team members are **very similar** in terms of age, professional background, and gender. Your manager, Sam, was planning the release of the game to the market.

However, you, as a team member, felt that the game had a few issues—such as being unstable and prone to crashing on certain devices. Most of your colleagues are also **completely unaware** of the problems with the game and about their severity. That is, most of them have the **very different** information and knowledge that you have on this issue, and you are **one of the only people** on your team who knows about the issue.

Scenario 3: Low information redundancy X High diversity

You are a full-time employee working at a mobile game development company, Adventure Inc., in the role of a technician who tests games before they are launched. You work closely in a team with five other people that had designed a promising new mobile game, which members of the organisation hoped would help Adventure Inc. regain its leading market position.

Your team members are **very diverse** in terms of age, professional background, and gender. Your manager, Sam, was planning the release of the game to the market.

However, you, as a team member, felt that the game had a few issues—such as being unstable and prone to crashing on certain devices. Most of your colleagues are also **completely unaware** of the problems with the game and about their severity. That is, most of them have the **very different** information and knowledge that you have on this issue, and you are **one of the only people** on your team who knows about the issue.

Scenario 4: High information redundancy X Low diversity

You are a full-time employee working at a mobile game development company, Adventure Inc., in the role of a technician who tests games before they are launched. You work closely in a team with five other people that had designed a promising new mobile game, which members of the organisation hoped would help Adventure Inc. regain its leading market position.

Your team members are **very similar** in terms of age, professional background, and gender. Your manager, Sam, was planning the release of the game to the market.

However, you, as a team member, felt that the game had a few issues—such as being unstable and prone to crashing on certain devices. Most of your colleagues are also **fully aware** of the problems with the game and about their severity. That is, most of them have the

very similar information and knowledge that you have on this issue, and you are **not the only person** on your team who knows about the issue.

Manipulation checks (diversity):

Based on the scenario, please rate the following statement:

How diverse is the team in the scenario in terms of age, gender and professional background? (1 = not diverse at all, 5 = extremely diverse)

Manipulation checks (information redundancy):

Based on the scenario, please rate the following statement:

How aware were team members about the issues with the mobile game? (1 = not aware at all, 5 = extremely aware)

Prohibitive voice scales (Liang et al., 2012):

Please read each of the following statements. Rate the extent to which you, as a **team member**, would **speak up** personally to Sam about the issues of the mobile game.

1. I would advise Sam to delay the release of the game and its issues. (1= strongly disagree, 5 = strongly agree)
2. I would speak up honestly to Sam about delaying the release of the game and its issues, although when dissenting opinions exist. (1= strongly disagree, 5 = strongly agree)
3. I would voice out my own thoughts to Sam about delaying the release of the game, although it might embarrass Jack. (1= strongly disagree, 5 = strongly agree)
4. I would point out issues to Sam about the game, although it might hamper my relationship with Sam. (1= strongly disagree, 5 = strongly agree)
5. I would proactively report the issues to Sam. (1= strongly disagree, 5 = strongly agree)

Silence scales (Tangirala and Ramanujam, 2008):

Please read each of the following statements. Rate the extent to which you, as a **team member**, would personally **remain silent** about the issues with the mobile game.

1. I would choose to remain silent in my team when I noticed the issues about the game. (1= strongly disagree, 5 = strongly agree)
2. Although I have ideas for resolving the issues, I would choose not to speak up in my team. (1= strongly disagree, 5 = strongly agree)
3. I would say nothing to others about potential issues about the game that I notice in my team. (1= strongly disagree, 5 = strongly agree)
4. I would remain silent when I have information that might help prevent these issues about the game in my team. (1= strongly disagree, 5 = strongly agree)
5. I would keep quiet instead of asking questions when wanting to get more information on the issues about the game in my team. (1= strongly disagree, 5 = strongly agree)

Diffusion of responsibility scales (Hussain et al. (2019):

Please read each of the following statements. Rate the extent to which you, as a **team member**, would **feel responsible** about the issues related to the game.

1. I would feel that it was up to me to bring up the issue with Sam. (reverse-coded) (1= strongly disagree, 5 = strongly agree)

2. I would feel that bringing up the issue is my responsibility. (reverse-coded) (1= strongly disagree, 5 = strongly agree)
3. I would feel that it was personally my responsibility to share concerns with Sam. (reverse-coded) (1= strongly disagree, 5 = strongly agree)
4. I would feel that my team members would bring up the issue with Sam. (1= strongly disagree, 5 = strongly agree)
5. I would feel that my team members have responsibility for speaking up about the issue to Sam. (1= strongly disagree, 5 = strongly agree)

Attention check:

If you are still paying attention, please select Disagree. (1= strongly disagree, 5 = strongly agree)

Promotive voice scales (Liang et al., 2012):

Please read each of the following statements. Rate the extent to which you, as a **team member**, would speak up personally to Sam about the **improving the mobile game**.

1. I would proactively develop and make suggestions for another new mobile game with Sam. (1= strongly disagree, 5 = strongly agree)
2. I would proactively suggest new games to Sam that account for similar issues. (1= strongly disagree, 5 = strongly agree)
3. I would raise suggestions to improve game designs with Sam that account for similar issues. (1= strongly disagree, 5 = strongly agree)
4. I would proactively voice out constructive suggestions that help Sam release the game on time. (1= strongly disagree, 5 = strongly agree)
5. I would make constructive suggestions to proactively improve the current game with Sam. (1= strongly disagree, 5 = strongly agree)

Voice self-efficacy scales (Tangirala et al., 2013; for robustness check):

Please read each of the following statements. Rate the extent to which you feel **competent** to speak up **in general**.

1. I feel confident about my ability to voice concerns about task-related issues to my manager. (1= strongly disagree, 5 = strongly agree)
2. I feel self-assured about my capabilities to speak up on work-related issues to my manager. (1= strongly disagree, 5 = strongly agree)
3. I feel like I have mastered the skills necessary to speak up to my manager. (1= strongly disagree, 5 = strongly agree)

Appendix B: Comparison of original and adapted measures for promotive and prohibitive voice items

Original measures (Liang et al., 2012)	Adapted measures
Promotive voice	
Proactively develop and make suggestions for issues that may influence the unit.	I would proactively develop and make suggestions for another new mobile game with Sam.
Proactively suggest new projects which are beneficial to the work unit.	I would proactively suggest new games to Sam that account for similar issues.
Raise suggestions to improve the unit's working procedure.	I would raise suggestions to improve game designs with Sam that account for similar issues.
Proactively voice out constructive suggestions that help the unit reach its goals.	I would proactively voice out constructive suggestions that help Sam release the game on time.
Make constructive suggestions to improve the unit's operation.	I would make constructive suggestions to proactively improve the current game with Sam.
Prohibitive voice	
Advise other colleagues against undesirable behaviors that would hamper job performance.	I would advise Sam to delay the release of the game and its issues.
Speak up honestly with problems that might cause serious loss to the work unit, even when/though dissenting opinions exist.	I would speak up honestly to Sam about delaying the release of the game and its issues, although when dissenting opinions exist.
Dare to voice out opinions on things that might affect efficiency in the work unit, even if that would embarrass others.	I would voice out my own thoughts to Sam about delaying the release of the game, although it might embarrass Sam.
Dare to point out problems when they appear in the unit, even if that would hamper relationships with other colleagues.	I would point out issues to Sam about the game, although it might hamper my relationship with Sam.
Proactively report coordination problems in the workplace to the management.	I would proactively report the issues to Sam.

Interlude to Chapter 4

In Chapter 3, the results of the study suggested that the group context significantly shapes different voice types, specifically, that information redundancy and group diversity interact to influence employees' decisions to engage in promotive and prohibitive voice. While this study was investigated in the context of groups, it was nevertheless, a simulated group scenario with limitations which I have outlined.

In the next chapter, I aim to deepen our understanding of how voice operates at the organisational level, extending beyond the group contextual factors that influence group member voicing decisions, and the expression of organisational-level employee voice via social media (i.e., e-voice). I address research question 3 by investigating how organisational-level e-voice through digital platforms influence organisational outcomes, such as employee satisfaction, positive word of mouth and organisational performance. While traditional voice behaviour is typically studied in face-to-face or hierarchical workplace contexts, the rise of digital communication platforms has introduced e-voice. A defining feature of voice behaviour is the perceived interpersonal risk involved in speaking up, particularly when challenging norms or authority. However, in digital contexts, affordances (i.e., perceived utilities) of platforms enable this risk to be significantly reduced. These shifts suggest that e-voice may warrant conceptual separation from traditional voice behaviour. Based on affordance perspectives and organisational social capital theory, I examine e-voice as digital voice expressed on a well-established online employer review platform Glassdoor. By analysing three dimensions of e-voice – quantity, sentiment, and content heterogeneity – I explore how organisational-level e-voice can influence key organisational outcomes. I extend this thesis's multi-contextual investigation of voice into the digital context, providing new insights into the implications of employee voice in digitally mediated environments.

Chapter 4: The organisational and digital contexts of voice: The influence of organisational-level e-voice on organisational effectiveness

Abstract

In this study, I examine social media as an organisational and digital contexts for electronic voice (e-voice) and investigate the influence of three dimensions of e-voice: quantity (scaled proportionally for each firm based on the number of current employees using publicly available data on their workforce), sentiment (capturing the overall emotional tone of employee opinions, emotions and attitudes in terms of its valence or polarity through sentiment analysis techniques) and content heterogeneity (measured by the variety and diversity of issues, concerns, and feedback expressed by employees through topic modelling and distribution analysis). Based on affordance perspectives and organisational social capital theory, I investigate the relationship between e-voice quantity and organisational performance, the mediating roles of employee satisfaction and positive word of mouth, and the moderating effects of e-voice sentiment and content heterogeneity. Using machine learning techniques incorporating sentiment analysis and topic modelling, I analysed 347,305 e-voice (suggestions / advice to management) posts shared on online employer review platform Glassdoor by employees from 301 publicly traded U.S.-based organisations over a 5-year period (2015 – 2019). I then linked the e-voice data to objective organisational performance data obtained from the COMPUSTAT database, which provides financial data on publicly traded firms. Based on a longitudinal, organisational-level time-lagged analysis, results showed that at the organisational level, a higher quantity of employee e-voice was significantly associated with stronger financial performance, particularly when the content was positive (i.e., e-voice sentiment). This study offers important theoretical and practical implications for organisations and managers seeking to leverage both internal and external social media platforms to cultivate digitally enabled environments that support employee

voice. In doing so, this study responds to calls for research into the organisational-level impacts of digital channels like social media.

Keywords: E-voice, employee voice, organisational performance, sentiment analysis

1 Introduction

As workplaces become increasingly digitalised, the nature of organisational communication is evolving rapidly, prompting the need to examine how voice is expressed in digital environments (Bernauer & Kornau, 2022). Digital platforms such as social media, emails, online surveys and internal chatrooms are reshaping how employees raise concerns, offer suggestions and participate in decision-making. Shifting from traditional in-person communication, electronic voice (e-voice) is an emerging phenomenon. In their examination of digitalised workplaces, Bernauer and Kornau (2022, p. 4) defined e-voice as “how employees raise issues, contribute solutions, and participate in decision-making through electronic communication tools”. Despite its growing significance and collective impact individuals can make via digital platforms, research on e-voice remains nascent and its broader implications for organisational outcomes are still underexplored (Walker, 2021).

The use of e-voice platforms has often been met with organisational resistance, particularly when these platforms are external or ‘unsanctioned’ (Thompson et al., 2020). The literature indicates that unless hosted internally, such as through enterprise social media, e-voice platforms are typically not endorsed by organisations and are thus considered unsanctioned (Thorntwaite et al., 2020). Nonetheless, their potential organisational impact might be substantial and cannot be overlooked. Social media platforms are especially valuable to employees who perceive them as affording opportunities to pursue specific goals, such as expressing constructive suggestions or voicing grievances, whether publicly or anonymously, to a broader audience (Khan et al., 2023). While traditional voice research has largely examined internal voice channels and mechanisms aimed at enhancing organisational or team functioning (Morrison, 2011), the increasing use of external voice channels reflects a growing reality – one that can carry both benefits and risks for organisations and employees. For instance, Twitter was described as a ‘microphone for the masses’ (Murthy, 2011), where

employees expressed work-related ideas and their positive or negative attitudes toward workplace events, thereby impacting the employment relationship and organisational reputation (Conway, 2019).

The use and influence of social media have garnered increasing scholarly attention as a prominent e-voice platform in recent years (Holland et al., 2016; Jebsen et al., 2022; Khan et al., 2025; Martin et al., 2015). Defined as “digital Web 2.0 platforms that facilitate information sharing, user-created content, and collaboration across people” (McFarland & Ployhart, 2015, p. 1654), social media encompasses content-sharing platforms, social networking sites, blogs and wikis (Vaast & Kaganer, 2013). It allows employees to informally share opinions and ideas, while interacting and collaborating with other employees who can contribute and endorse ideas in less structured settings (Forsgren & Byström, 2018; Liu & Bakaci, 2019). These perceived utilities of social media, also known as affordances (Khan et al., 2023), empower employees to voice concerns, provide feedback and influence organisational decisions in highly visible and collective ways (Leonardi & Vaast, 2017; Syed, 2020). For example, in 2018, Google employees coordinated global walkouts via social media to protest internal policies (Bhuiyan, 2019), while in 2023, Starbucks employees leveraged X to spotlight poor working conditions, prompting swift organisational responses (Levesque & O’Neill, 2024). The shift to remote work during the COVID-19 pandemic further accelerated employees’ reliance on digital platforms to communicate, provide suggestions and to voice work-related issues and concerns (Min et al., 2021; Saura et al., 2022; Zhang et al., 2021).

Unlike traditional face-to-face voice, which relies primarily on spoken communication, electronic platforms have expanded the modes of voice channels and expression to include textual, visual and video formats (Thornthwaite et al., 2020).

Historically, traditional voice literature has tended to conceptualise voice as a unidimensional

construct, particularly at the organisational level (e.g., Lam & Mayer, 2014), often focusing on the quantity or frequency of voice behaviours among employees. In contrast, the nature of e-voice content is inherently multidimensional (Walker, 2021). To date, studies have examined different dimensions of e-voice. The first relates to the quantity of e-voice, which refers to the frequency of voice expressions shared by employees through social media (Conway et al., 2019) and reflects the aggregate level of e-voice across an entire organisation. The second dimension of e-voice relates to its sentiment, based on evidence that when expressing e-voice, employees adopt varied tones (e.g., positive or negative) that reflect specific attitudes (Xu et al., 2022). The third dimension of e-voice is content heterogeneity, which refers to the diversity of issues, ideas and suggestions expressed (Kiliç & Çadirci, 2022; Saura et al., 2022).

Despite the rising use of social media for e-voice, many organisations are not sufficiently tapping into this important source of employee voice that could be used to inform and enhance organisational culture and community (Gibbs et al., 2013; Holland et al., 2016). Although readily available and accessible, employee voice data at the organisational level, captured through social media, remains a particularly underutilised source of ‘big data’ (Conway, 2019). Moreover, despite increasing scholarly interest, more broadly, most voice research continues to focus on the individual or group level (Morrison, 2023), leaving organisational-level investigations of employee voice severely underdeveloped. One exception is a study conducted by Lam and Mayer (2014), who examined organisational-level customer-oriented voice, conceptualised as the aggregation of employees’ voice behaviours that advocate for customer needs. Drawing on time-lagged field data from 132 employees and their supervisors across 41 hospitals, the authors found that higher levels of aggregated voice at the hospital level were associated with greater customer satisfaction, which in turn predicted enhanced overall hospital service performance. However, the

potential connections between e-voice and key organisational outcomes, such as corporate reputation and performance, are still underexplored and not well understood (Holland et al., 2019; Thornthwaite et al., 2020; van Zoonen et al., 2014). Thus, at the organisational level, a more nuanced understanding is required – one that considers how these additional dimensions may uniquely shape the way e-voice is perceived, received and responded to by the organisation.

In this study, I investigate the influence of organisational-level e-voice on organisational performance at the organisational level by integrating affordance theory (Khan et al., 2023) and organisational social capital theory (Leana & van Buren, 1999). From an affordance perspective (Evans et al., 2017), I argue that the quantity of e-voice plays a key role in influencing employee satisfaction and positive word of mouth (WOM). Although employee satisfaction and positive WOM are highly correlated, they represent conceptually distinct outcomes. Employee satisfaction reflects a collective internal evaluative state (Alegre et al., 2016; Brief, 1998), while positive WOM is an externally communicative behaviour (Keeling et al., 2013). Examining both employee satisfaction and positive WOM enables me to capture the multidimensional nature of e-voice's impact in digital contexts. The perceived affordances of e-voice platforms (e.g., visibility, association, persistence, editability and anonymity) enable and encourage employees to actively engage in sharing their ideas, suggestions and concerns online (Evans et al., 2017; Khan et al., 2023; Kim & Leach, 2020). These affordances shape how employees perceive the utility of digital platforms for meaningful expression, fostering a more vocal, active and engaged workforce (Khan et al., 2023). From an organisational social capital perspective, increasing the density of interaction ties and fostering relational capital through trust and perceived responsiveness (Leana & van Buren, 1999; Lin, 2001). When employees collectively engage in e-voice, they contribute to a culture of openness and inclusion, which strengthens organisational social capital. While

prior research positions job satisfaction as a driver of voice, organisational social capital theory suggests that the act of voicing itself, particularly in environments that support social capital development, can be a source of satisfaction. By engaging in e-voice, employees build relational trust and shared meaning, which are key antecedents of satisfaction (Holland et al., 2011; Nawakitphaitoon & Zhang, 2021). I propose that organisations with a higher quantity of e-voice are therefore likely to reflect greater levels of satisfaction, particularly when e-voice content is characterised by positive sentiment and a broad diversity of topics (high content heterogeneity). These characteristics suggest not only active participation but also constructive and wide-ranging discourse. Based on affordance theory, I propose that when employees perceive that their voice is visible, persistent and potentially impactful, they are more likely to view the platform as a valuable channel for expression. In turn, this can lead to more positive WOM, as employees share favourable and diverse views about the organisation.

Integrating organisational social capital theory (Leana & van Buren, 1999), I further argue that organisations with higher levels of employee satisfaction and positive WOM are more likely to achieve stronger performance, including enhanced financial outcomes. Organisational social capital refers to the collective value derived from high-quality relationships, shared norms, trust, and mutual obligations among employees. When employees are satisfied and feel heard, as enabled through e-voice, this strengthens relational trust, fosters reciprocity and reinforces a shared commitment to organisational goals (Ellinger et al., 2013).

Indeed, high workforce satisfaction signals a positive collective climate (Schneider et al., 2003), which facilitates more efficient resource mobilisation and more agile responses to strategic challenges. These capabilities contribute directly to improved organisational performance. Similarly, positive WOM reflects and reinforces organisational social capital.

When employees voluntarily share favourable messages about their organisation, it indicates strong identification, support and trust (Park et al., 2025; Ruge et al., 2021). There is evidence linking positive WOM with enhanced organisational external reputation, increased capacity to attract better talent and customer goodwill (Keeling et al., 2013). Thus, through e-voice, organisations that cultivate high employee satisfaction and positive WOM are effectively building strong reservoirs of organisational social capital. This intangible asset strengthens overall organisational functioning and is closely linked to superior performance outcomes, including measurable financial gains.

Hence, drawing on affordance perspectives (Khan et al., 2023) and organisational social capital theory (Leana & van Buren, 1999), this study examines how e-voice influences two proximal outcomes, employee satisfaction and positive WOM, which, in turn, affect the distal outcome of organisational performance. Specifically, I adopt an affordance lens to investigate three dimensions of e-voice at the organisational level – quantity, sentiment, and content heterogeneity – and their relationships with employee satisfaction and positive WOM. Building on organisational social capital theory, I then examine how these proximal outcomes contribute to organisational performance. Finally, I propose that the indirect effects of e-voice quantity on organisational performance are moderated by its sentiment and content heterogeneity, highlighting the conditional nature of these relationships.

The figure below depicts my overall theoretical model.

organisations. While e-voice platforms have begun to attract scholarly attention within the voice literature (Wilkinson et al., 2021), most existing research remains focused at the individual level, examining personal expressions of voice or dissent on digital platforms such as X (formerly Twitter) (Thompson et al., 2020; van Zoonen et al., 2016). At the organisational level, studies tend to be qualitative in nature, often relying on single or comparative case studies (e.g., Bernauer & Kornau, 2022; Ellmer & Reichel, 2021). This study therefore contributes to a deeper understanding of how organisational-level e-voice can shape organisational outcomes. By analysing e-voice as an aggregate, organisation-wide phenomenon, this study highlights the potential for employees' online engagement to influence organisational performance in meaningful ways.

Finally, this study contributes to the methodological advancement of voice research at the organisational level, particularly in digital contexts where textual content is the main form of communication. While most prior voice research focuses on the frequency of voice expressions, often only at one point in time (i.e., cross-sectionally) and in assumed in-person settings, this study leverages rich, longitudinal and textual data, using advanced machine learning techniques and attending to the unique characteristics and affordances of digital voice platforms. These methods enable a more nuanced understanding of e-voice dynamics at the organisational level and demonstrate the value of computational approaches for analysing large-scale digital communication data.

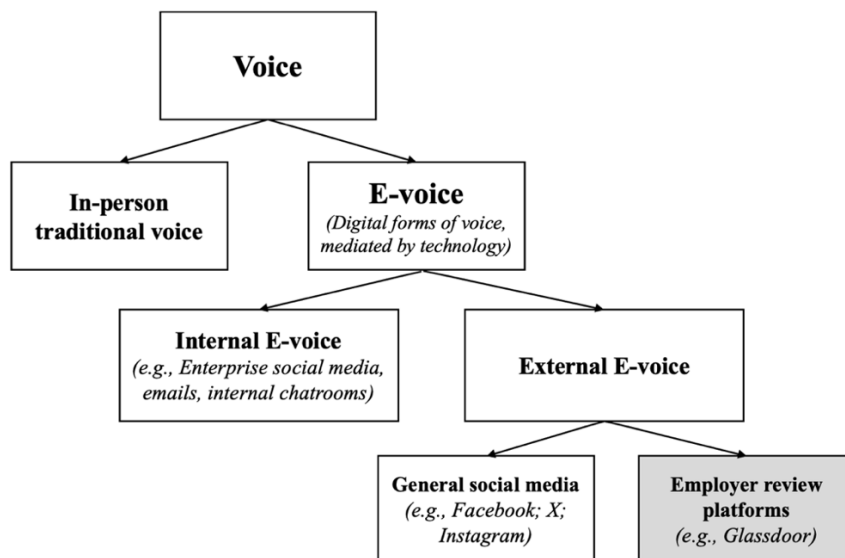
2 Theoretical background

2.1 Internal vs. external e-voice

As organisational communication increasingly shifts toward digital environments, the rise of digital technologies has introduced a sub-genre of voice, supplementing traditional, in-

person voice, that is, e-voice, or “voice expressed online” (Walker, 2021, p. 780). As seen in Figure 4.2, internal e-voice are facilitated through enterprise social media, emails and internal chatrooms. Internal platforms are restricted to an organisation’s stakeholders and enable collaboration and knowledge sharing that can enhance productivity and innovation (Dittes & Smolnik, 2019). Much of the early literature focused on organisationally sanctioned web-based tools designed to improve internal communication, problem-solving and knowledge exchange (Thorntwaite et al., 2020). For example, in the early stages of technology’s integration with workplace voice, Bishop and Levine (1999) analysed how computer-mediated communication (CMC) enhanced voice and found that CMC enabled employees’ discussions to be broadcasted beyond their immediate physical locations to reach the entire organisation via general internal bulletin boards. The authors found that employees who shared similar concerns regarding their organisation could locate each other more efficiently and provide mutual support. However, they discovered CMCs only gave voicers a ‘facade of power’ because management would mostly ignore or resist changes voicers proposed. As a result, employees became more dissatisfied than if they did not speak up at all.

Figure 4.2: Voice expression (in-person traditional voice and e-voice platforms)



More recent research on enterprise social media (ESM) have found that it is used to facilitate and monitor multidirectional workplace communication (Forsgren & Byström, 2018; Leonardi et al., 2013). ESM allows employees to broadcast messages, interact with colleagues and share files in a visible, networked environment (Leonardi et al., 2013). Unlike emails or chatrooms, ESM content is widely accessible within the organisation, enabling employees to reach a wider internal audience (Leonardi & Vaast, 2017). Despite organisations affirming the use of internal platforms such as ESM to express e-voice as sanctioned channels, there is a possibility that employees may perceive these channels to be viewed as ineffective, restrictive, or risky (Lee & Kim, 2020; Miles & Mangold, 2014). For example, organisations may struggle to facilitate open dialogue while maintaining control and oversight (Gegenhuber & Weber, 2021). Excessive social interaction can create ‘social overload’, diminishing collaboration and trust (Bernauer & Kornau, 2022). Hierarchical constraints or concerns about internal visibility may deter employees from speaking up (Ghani & Malik, 2023). Additionally, digital divides may exclude employees with lower technical proficiency or limited digital access, resulting in less accurate representation of the overall workforce (DiMaggio et al., 2001; Warschauer, 2003).

External e-voice channels, such as Glassdoor, LinkedIn and X (formerly Twitter), differ from internal e-voice platforms (e.g., enterprise social media) in that they are publicly accessible (Schlagwein & Hu, 2017). The public nature of external e-voice channels offers new forms of voice expression that can overcome traditional barriers such as hierarchical power distances (Ghani & Malik, 2023) and physical separation from the workplace. These platforms offer employees greater autonomy, reach, and perceived safety through features like anonymity, allowing employees to more openly express voice concerns, share ideas and influence audiences beyond organisational boundaries.

Despite increasing use of digital tools internally, much of the voice literature still assumes that voice is directed upward, typically toward management. Even in studies of internal e-voice, limited attention has been paid to how voice circulates across multiple hierarchical levels or among peer networks (Kalfa & Budd, 2020; Pfrombeck et al., 2022). In contrast, external e-voice platforms afford employees the ability to bypass traditional managerial gatekeeping. These platforms facilitate horizontal communication among employees and open new channels to external audiences, including the general public, prospective employees and investors (Fiorito et al., 2002; Holland et al., 2019). As a result, employees can now share their views with broader online communities, reshaping what is voiced, how it is framed and who the audience is (Thorntwaite et al., 2020). For example, employees who engage with external platforms can act as informal brand ambassadors, enhancing organisational reputation, employer branding, attract talent and build trust with external stakeholders, such as investors and clients (Dreher, 2014; Jung & Suh, 2019).

Overall, despite this shift towards online behaviours and the expression of e-voice, some organisations remain rooted in traditional practices that restrict voice opportunities. For example, employers may attempt to block or discourage the use of external e-voice platforms, particularly when employee expression is perceived as inappropriate or disruptive (Donaghey et al., 2011; Pfrombeck et al., 2022). Indeed, the use external e-voice comes with risks. While these platforms expand the reach and impact of employee voice, they may also lead to fragmented narratives, the spread of misinformation and reputational vulnerabilities for organisations. For employees, participation in unsanctioned voice channels may raise concerns about privacy, retaliation or professional consequences (Barnes et al., 2018; Holland et al., 2011; Walker, 2021). In this way, external e-voice platforms represent both a powerful mechanism for collective influence and a source of uncertainty, presenting a complex terrain for organisations to navigate in the digital era.

2.2 E-voice and technology affordances

To examine the impact of social media on organisations, scholars increasingly draw on affordance perspectives (Bucher & Helmond, 2017; Leonardi & Vaast, 2017; Schlagwein & Hu, 2017; Treem & Leonardi, 2012). The concept of affordance was originally introduced by Gibson (1979) to describe action possibilities within an environment. Norman (2013) later adapted the term in the context of design and human–computer interaction, focusing on how the features of an object suggest its potential use. In organisational research, affordances have since been understood as the possibilities for action that emerge through direct interaction with technology (Leonardi, 2011). This perspective has been increasingly applied to the study of electronic voice (e-voice) behaviour on social media platforms (Khan et al., 2023; Khan et al., 2025; Mao & DeAndrea, 2019). Ronzhyn and colleagues (2022, p. 2178) define social media affordances as the “perceived actual or imagined properties of social media, emerging through the relation of technological, social, and contextual factors, that enable and constrain specific uses of the platforms”. Rather than offering a single affordance, e-voice platforms typically present a combination of affordances that users evaluate when deciding how to engage (Ellison et al., 2015). For example, users who perceive high visibility and persistence in a platform may restrict the content of their e-voice or limit the audience to protect their privacy (Gibbs et al., 2013). More broadly, Khan et al. (2023) identified five key social media affordances relevant to e-voice: visibility, association, persistence, anonymity, and editability. In a follow-up study on the increased use of social media for e-voice during the COVID-19 pandemic, Khan et al. (2025) found that anonymity, persistence, and editability were particularly important in enhancing employees’ psychological safety to express ideas, feedback, and concerns that were previously difficult to voice in person.

2.2.1 Anonymity

Anonymity is a social media affordance that enables users to conceal their identity when engaging with a platform (Fox & McEwan, 2017). In organisational contexts, anonymity can encourage employees to express themselves more openly by reducing the fear of retaliation, particularly in environments characterised by unfavourable voice climates (Khan et al., 2025). However, this affordance may be less desirable when employees seek recognition or rewards for their ideas, as identification is necessary for attribution (Robbins et al., 2020). Nevertheless, the option for anonymous participation can promote transparency and collaboration and has been shown to enhance employees' willingness and perceived psychological safety to report unethical or fraudulent behaviour (Gibbs et al., 2013; Johansson & Carey, 2016).

2.2.2 Persistence

Persistence is a social media affordance that allows e-voice content to remain accessible and retrievable after it is shared, thereby facilitating ongoing dialogue and enabling employees to revisit and build upon previous contributions (Khan et al., 2023). While this durability supports continued engagement, persistent content can also be misinterpreted if taken out of context and negative e-voice may pose reputational risks to organisations (Boyd, 2010). Nevertheless, persistence promotes sustained interaction, encouraging collaborative dialogue and the development of collective insight. It also introduces a degree of accountability for e-voice targets, as recorded feedback enables employees to track responses from intended audiences and assess the platform's effectiveness in achieving desired outcomes (Miles & Mangold, 2014).

2.2.3 Editability

Editability is a social media affordance that allows users to revise their e-voice content, providing more time for thoughtful responses compared to the immediacy required

in face-to-face communication (Gode et al., 2020). This feature grants users greater control over how their ideas are expressed (Fox & McEwan, 2017), enabling them to refine their messages to better align with their intentions. Editability supports dialogue and collaboration by allowing employees to revise their input in response to new information or feedback, facilitate collective decision-making and problem-solving. However, this affordance can also lead to selective message construction or manipulation, which may undermine trust if revisions result in misinformation or perceived misrepresentation (Khan et al., 2023).

2.2.4 Association

Association is a type of affordance that allows users to connect with others and build social or professional relationships (Khan et al., 2023). Informal connections on social media cultivate emergent, organic relationships, often characterised by weak ties (Vaast et al., 2017). This connectivity can bridge users, strengthen existing relationships and foster a sense of community (van Zoonen et al., 2014). However, employees may also be less likely to voice if they perceive their voice targets may be unresponsive, resulting in delayed actions or inaction altogether. Nonetheless, platforms with an affordance of association enable employees to achieve their desires and goals of information sharing and receiving, entertainment and social interaction (Liu & Bakici, 2019).

2.2.5 Visibility

Visibility is a social media affordance that enables users to shape their self-presentation and control the information they share, including content displayed on personal profiles (Treem & Leonardi, 2012). It allows users to learn about others through the information they disclose, fostering greater interpersonal awareness. Within organisations, visibility tends to promote trust among coworkers by making individuals' behaviours, expertise, preferences and communication networks more transparent (Treem & Leonardi). This increased transparency differentiates social media from other technologies and can

support trust-building, collaboration and the exchange of ideas (Cao et al., 2016; Gibbs et al., 2013). However, this affordance may discourage employees from voicing personal concerns or dissenting views due to fear of negative repercussions (Khan et al., 2023), particularly when they feel they lack control over how their contributions will be interpreted. Despite these risks, the affordance plays a valuable role in identifying both mainstream and divergent perspectives and in raising awareness of collective issues. In doing so, it enables employees to collaboratively refine and articulate ideas and feedback (Subhakaran et al., 2020).

2.3 E-voice dimensions

2.3.1 E-voice quantity

E-voice quantity refers to the collective volume of feedback, opinions, and ideas expressed by employees within an organisation. It serves as an important indicator of how many employees are proactively engaging, whether to promote change, express dissatisfaction or contribute constructively to organisational improvement (Morrison, 2011). Low levels of e-voice quantity may reflect a disengaged or indifferent workforce, whereas higher levels suggest a more engaged employee base. The overall quantity of e-voice can also signal widespread awareness of organisational issues and a shared interest in shaping the work environment (Maynes & Podsakoff, 2014; Walker, 2021).

From an affordance perspective, e-voice quantity is shaped by a combination of platform features that enable and constrain user engagement. The affordances of visibility and association allow employees to rapidly connect with others who share similar concerns, facilitating the development of collective feedback (Khan et al., 2025). Anonymity creates a psychologically safe environment that encourages participation from individuals who may otherwise remain silent or under-represented, thereby contributing to greater e-voice quantity (Barnes et al., 2019). The affordance of persistence enables users to retrieve and reference previous e-voice contributions on accessible platforms. Unlike face-to-face conversations,

where managers and coworkers may selectively recall only certain aspects of what was shared, often ignoring input they disagree with (Van Dyne & LePine, 1998), persistent content remains available in its original form. Even direct communication methods such as private emails risk miscommunication or being overlooked by a limited number of recipients (Sinitsyna et al., 2024). Despite these benefits, employees may be reluctant to use these platforms they are exposed to career or reputational risks, especially when content becomes visible to unintended audiences (Khan et al., 2025). Nonetheless, e-voice platforms that incorporate these affordances enable feedback to be accurately captured and preserved, reflecting both the content and intent of employees' messages. This persistent documentation increases the likelihood that e-voice expressions are acknowledged and addressed by key stakeholders, such as managers and the broader organisation.

2.3.2 E-voice sentiment

E-voice sentiment refers to the affective dimension of e-voice, often described in terms of its valence or polarity, that is, whether the expressed feedback, opinions or ideas are positive, negative or neutral (Sharma et al., 2025). More broadly, sentiment reflects an individual's attitude toward a specific target or topic (Mohammad, 2016). At the organisational level, e-voice sentiment captures the overall emotional tone of employee feedback, indicating collective opinions, emotions and attitudes toward the organisation (Heskett et al., 2008; Mohammad, 2021). Common emotional expressions observed in social media-based voice include six basic emotions: anger, sadness, fear, joy, disgust and surprise (Min et al., 2021). Positive sentiment reflects emotions such as enthusiasm, contentment and happiness, often signalling alignment between employees and their organisation across areas such as values, goals and expectations (Hsiung, 2012), and is associated with higher levels of employee satisfaction. Negative sentiment, by contrast, includes expressions of frustration, anger or distress, often signalling misalignment or dissatisfaction. Neutral sentiment may

reflect a lack of emotional engagement, indifference or absence of strong opinions (Mohammad, 2021), and may suggest that employees perceive little urgency for change or are disengaged from organisational issues.

From an affordance perspective, the feature of editability allows e-voicers more time to craft and refine their messages compared to the immediacy required in face-to-face discussions. This additional time enables employees to rephrase content to better resonate with target audiences, soften critical remarks, increase perceived professionalism and remove emotional overtones conveyed through sentiment polarity (Gode et al., 2020). However, editability may also lead individuals to engage in self-censorship, becoming overly cautious in how they express their views in an effort to protect themselves. This can result in less transparent communication and superficial discussions that fail to engage meaningfully with the issues at hand (Madsen & Verhoeven, 2016).

At the collective level, extreme sentiment expressions, especially those that are strongly negative, can signal the significance and urgency of certain issues that might otherwise remain unspoken by a smaller subset of employees (Lee & Cranage, 2014; Zhu et al., 2021). For example, highly negative e-voice may indicate pressure for organisational response and corrective action in sensitive areas. However, the affordance of anonymity may also encourage venting or negative expression that lacks constructive intent, leading managers to perceive such feedback as opportunistic or untrustworthy and thus dismiss it (Ravazzani & Mazzei, 2018; Thompson et al., 2020). Nonetheless, organisations are increasingly reluctant to ignore critical feedback, particularly in online spaces where negative sentiment can affect public reputation. Employers may also respond more attentively due to the influence of negativity bias, which refers to the tendency for negative information to be more salient, memorable and perceived as more diagnostic than neutral or positive input (Morgan & Chapman, 2024; Vaish et al., 2008; Zhu et al., 2021)

2.3.3 E-voice content heterogeneity

E-voice content heterogeneity refers to the variety and diversity of issues, concerns and feedback expressed by employees across different organisational roles and units (Chatman & O'Reilly, 2016). It can be reflected in the range of topics raised, such as salary, career advancement or work–life balance, and in the types of content categories expressed, including contributions, suggestions, concerns and complaints (Khan et al., 2023). High content heterogeneity signals a wide spectrum of employee perspectives, which can foster creativity, innovation and organisational adaptability (Corritore et al., 2020). It may also indicate an underlying diversity within the workforce and an organisation's openness to varied viewpoints, including those shaped by cultural, demographic or experiential differences (Corritore et al., 2020).

From an affordance perspective, editability enables employees to carefully shape their e-voice content, particularly when addressing sensitive topics that may be underdiscussed yet critical to organisational improvement. However, this control may lead to selective voice, where employees restrict their feedback to certain topics or avoid expressing minority views, depending on the nature of their audience (Neubaum & Krämer, 2018). Despite these challenges, the affordances of visibility and anonymity allow e-voicers to choose platforms that offer varying degrees of exposure based on how widely they intend their voice to be seen (Parth et al., 2023). For example, employees may opt to share lower-risk, broader concerns on public anonymous platforms such as online employer review platform Glassdoor to maximise reach, while reserving more controversial or high-risk feedback for internal platforms with limited visibility to minimise personal or professional repercussions.

2.4 Effect of e-voice quantity on employee satisfaction and positive WOM

As noted above, from an affordance perspective, digital platforms such as social media offer unique features, such as visibility, persistence and particularly anonymity, that

shape how employees engage in e-voice (Khan et al., 2023). These affordances can be especially valuable in contexts where interpersonal risks associated with speaking up might otherwise deter expression. Indeed, prior research identifies interpersonal risks and the role of psychological safety as an important underlying condition influencing voice behaviour (Edmondson, 2014). In this light, platform features like anonymity may help foster conditions that gives employees greater control over how they express themselves and manage the risks of voicing concerns or suggestions (Khan et al., 2025). By allowing employees to express their ideas or frustrations beyond traditional hierarchical structures and established voice norms, social media enables e-voice to function as a bottom-up channel of influence, rather than serving solely as a tool for top-down corporate messaging.

In terms of how these affordances of e-voice translates to employee satisfaction, at the organisational level, employee satisfaction reflects the collective affective evaluation of the shared work environment (Koys, 2001; Park & Kim, 2023). It encompasses satisfaction with organisational policies, practices and broader contextual factors (Park & Kim, 2023). Traditionally, job satisfaction has been defined as “an internal state that is expressed by affectively and cognitively evaluating an experienced job with some degree of favor or disfavor” (Brief, 1998, p. 86). This includes both general job satisfaction and satisfaction with specific facets, such as supervision, workload or remuneration (Cook, 1981; Curry et al., 1986). At the organisational level, employee satisfaction is shaped by broader organisational dynamics, including leadership styles, workplace policies and managerial practices (Robertson & Kee, 2017; Whitman et al., 2010). It emerges from multilevel interactions among coworkers, supervisors and the organisation as a whole (Alegre et al., 2016; Ostroff, 1992).

From an affordance perspective, employees’ use of e-voice platforms to share views about their organisation and employer can meaningfully shape their organisational

experiences, as these platforms support multidirectional communication (Liu & Bakici, 2019). The affordance of persistence enables e-voice content to remain accessible and reviewable over time, thereby contributing to the overall quantity of e-voice. Employees may experience greater satisfaction when their goal of holding the organisation accountable is achieved, particularly when persistent e-voice content enhances visibility and impact (Ghani & Malik, 2023; Khan et al., 2023). This amplification increases the likelihood that sensitive, underlying or latent issues are addressed proactively, fostering a ‘prevention is better than cure’ approach and ultimately enhancing employee satisfaction (Dube & Zhu, 2021).

The affordance of visibility also facilitates the broader dissemination of employee concerns and organisational responses, increasing the likelihood that e-voice reaches a wider audience, including senior management and key stakeholders (Ellmer & Reichel, 2021). As employees gain greater insight into organisational policies, practices and decisions, their uncertainty is reduced and their sense of satisfaction strengthened. Moreover, the affordance of association enables employees to connect not only with one another but also with key stakeholders and decision-makers. These digital connections foster a sense of shared purpose, reinforcing relational ties and amplifying the expression of common concerns (van Zoonen et al., 2014). When combined, I argue that such affordances of e-voice should be associated with more meaningful and satisfying organisational experiences (i.e., higher employee satisfaction).

Similarly, e-voice should also be associated with employees’ greater willingness to speak positively about their organisation (Lee & Suh, 2020), that is, positive WOM. WOM involves “staff and former employees communicating information and opinions about the organization, both within and beyond their social networks” (Keeling et al., 2013, p. 89) and may include both positive and negative expressions (Van Hove & Lievens, 2007). At its core, WOM is rooted in trust, transmitted through interpersonal networks strengthened by

emotional closeness, shared history and reciprocal engagement (Granovetter, 1973). This communication spans both informal private settings (e.g., face-to-face conversations) and public contexts (e.g., social media posts) and varies depending on the strength of interpersonal ties (Smith & Vogt, 1995). WOM shared through strong ties, such as those with close friends and family, tends to be more influential than that communicated through weaker ties, such as casual acquaintances or distant online connections (Bone, 1992).

Research shows that individuals with favourable experiences tend to express positive WOM, while those with unfavourable experiences tend to communicate negative WOM (Hollebeek & Chen, 2014). These evaluations may stem not only from employees' experiences with the organisation itself but also from their interactions with the e-voice platform, including how effectively it supports their expression and visibility.

Hypothesis 1: E-voice quantity is positively related to (a) employee satisfaction and (b) positive WOM.

2.5 Moderating roles of e-voice sentiment and content heterogeneity

While the sheer volume of e-voice alone is important, it is not sufficient. I argue that the relationship between e-voice quantity and outcomes such as employee satisfaction and positive WOM also depends on the sentiment of the voice content. Sentiment captures the emotional tone, whether positive, negative or neutral, of these expressions. Affordances such as anonymity, visibility and persistence (Treem & Leonardi, 2012) enable employees to express themselves more freely, including on sensitive topics, thereby fulfilling psychological needs related to voice and self-expression (Sun et al., 2025). However, when the prevailing sentiment of e-voice is positive, these expressions are more likely to promote favourable

organisational identification, enhance perceptions of organisational legitimacy and foster a sense of collective morale.

Conversely, when e-voice is predominantly negative, even a high volume of e-voice quantity may not translate into greater organisational-level satisfaction. Negative sentiment often reflects underlying frustration, perceptions of organisational unresponsiveness, or a sense of inefficacy, suggesting that employees may feel unheard despite having the opportunity to speak up (Rafaeli & Sutton, 1987). The tones shaped by such negative expressions can contribute to a less favourable affective climate, potentially undermining collective satisfaction and suppressing positive WOM (Ashkanasy, 2003). This highlights that while digital affordances enable expression, its sentiment shapes how it is emotionally received and interpreted at the organisational level. Even when platforms facilitate widespread voice participation, their ability to promote employee satisfaction and advocacy through positive WOM may be constrained if the dominant sentiment is negative. Therefore, positive sentiment in e-voice is likely to strengthen the relationship between voice quantity and outcomes such as employee satisfaction and positive WOM.

Hypothesis 2: E-voice sentiment moderates the relationships between e-voice quantity and (a) employee satisfaction and (b) positive WOM, such that the positive relationships are stronger when e-voice sentiment is more positive.

In terms of the moderating role of content heterogeneity, according to affordance theory, platforms that provide visibility, persistence and editability enable varied and nuanced forms of expression, allowing employees to engage in dialogue across a wide range of organisational concerns (Khan et al., 2023; Sun et al., 2025). This diversity of content not only reflects the breadth of employee engagement but also emphasises the platform's

functional affordances in supporting psychologically meaningful goals, such as self-expression, perceived relevance and a sense of impact (Treem & Leonardi, 2012).

When both e-voice quantity and content heterogeneity are high, employees are more likely to view the platform as a legitimate, inclusive and responsive communication channel, which in turn fosters greater collective satisfaction. High content heterogeneity signals that a diverse range of voices and concerns is welcomed, thereby enhancing perceptions of voice legitimacy, individual recognition and shared organisational value, all of which are key drivers of satisfaction at the organisational level (Shet et al., 2025). When e-voice content spans multiple topics, such as leadership, team culture, rewards, ethics or inclusion, this reflects employees' use of the platform for meaningful dialogue rather than merely facilitating venting or superficial commentary. This diversity of voice content enhances the credibility, authenticity and persuasiveness of the information shared, ultimately increasing employees' willingness to advocate informally for their organisation, whether through digital platforms or interpersonal channels (Sun et al., 2025).

In contrast, when e-voice quantity is high, but the content is narrow or repetitive, focused on the same recurring issues, it may indicate deeper, unresolved organisational problems. This lack of content diversity can limit employee satisfaction and diminish motivation to engage in authentic advocacy behaviours, such as positive WOM. Therefore, content heterogeneity may serve as another important moderator of e-voice, as a diverse range of voiced topics signals employees feeling more empowered to raise varied concerns and ideas. This perceived openness enhances the psychological effectiveness of voice-related affordances by reinforcing perceptions of issue legitimacy, employee agency and broad participation. Collectively, these qualities strengthen the positive relationship between e-voice quantity and both employee satisfaction and positive WOM.

Hypothesis 3: E-voice content heterogeneity moderates the relationships between e-voice quantity and (a) employee satisfaction and (b) positive WOM, such that the positive relationships are stronger when e-voice content heterogeneity is higher.

2.6 Indirect effect of e-voice quantity on organisational performance

As part of my integrative theoretical model (Figure 4.1), I also empirically test the organisational performance consequences of e-voice. Specifically, to understand how the affordances of e-voice may influence organisational performance indirectly through employee satisfaction and positive WOM, I draw on organisational social capital theory (Leana & van Buren, 1999). Organisational social capital is defined as a “resource reflecting the character of social relations within the organization, realized through members’ levels of collective goal orientation and shared trust” (Leana & van Buren, 1999, p. 540). Unlike human capital (e.g., skills, knowledge) or physical capital (e.g., equipment, infrastructure), social capital is an intangible asset that cannot be traded on the market. It centres on investments in social relationships with the expectation of returns (Lin, 2001). At the organisational level, social capital functions as a collective resource, co-owned by the organisation and its members, who benefit mutually from its presence. It resides in the relationships among individuals (Coleman, 1988). While Baker (1990) highlights the structural dimensions of relationship networks, Bourdieu (1986) and Putnam (1995) extend the concept to include both network structure and the resources accessible through these networks, such as trust and shared norms. Leana and van Buren (1999) identify two key components of organisational social capital: associability and relational trust. Associability reflects employees’ willingness and capacity to prioritise collective organisational goals over personal interests, while relational trust encompasses mutual respect, a sense of obligation and perceived trustworthiness among members of the organisation.

By integrating affordance theory with organisational social capital theory, I argue that e-voice platforms with affordances that foster relational trust and associability play a critical role in building organisational social capital. By enabling employees to voice ideas, provide feedback and maintain connections, these platforms foster the formation of social networks grounded in relational trust, cultivated through reciprocity, shared norms and sustained positive interactions. This, in turn, contributes to both relational capital and reputational capital. Relational capital refers to the quality of trust-based relationships among organisational members and stakeholders (Cousins et al., 2006), while reputational capital reflects the perception of an organisation's legitimacy, credibility and key characteristics in the eyes of stakeholders (Petrick et al., 1999). These forms of capital yield tangible organisational benefits: relational capital strengthens collaboration, supports employee retention, and promotes internal cohesion; reputational capital enhances the organisation's ability to attract talent, secure customers and investors, and maintain resilience during crises (Guo et al., 2025; Manabe & Nakagawa, 2022). Together, these resources enhance the organisation's capacity to adapt, innovate and maintain a sustainable competitive advantage, thereby reinforcing overall organisational performance.

Extensive evidence demonstrates that higher levels of employee satisfaction are associated with improved organisational performance (Becker et al., 2022; Whitman et al., 2010). For example, in a meta-analysis of 7,939 business units across 36 companies, Harter et al. (2002) found that employee satisfaction was positively correlated with key business outcomes, including productivity, profitability and retention. There is also ample evidence that satisfied employees tend to be more motivated, cooperative and productive, thereby contributing to organisational effectiveness (Merlo et al., 2006; Ostroff, 1992).

Positive WOM, whether conveyed digitally or through offline interpersonal networks, plays a vital role in shaping organisational attractiveness among external stakeholders, largely

due to its perceived trustworthiness and credibility (Lee & Suh, 2020; Ruge et al., 2021; Van Hoye & Lievens, 2007). For example, when employees share their work experiences on external platforms such as LinkedIn, they extend the organisation's reach, enhance visibility and project its values, culture and reputation to a broader audience (Rokka et al., 2014). This organic advocacy generates a ripple effect that extends beyond internal dynamics, strengthening the organisation's external reputation and drawing interest from prospective talent, customers and other stakeholders (Keeling et al., 2013; Zhang et al., 2022). Research by Van Hoye and Lievens (2007) further demonstrates that positive WOM can counteract the impact of prior negative publicity, improving potential employees' perceptions of organisational attractiveness. However, the credibility of the message depends on the source: Van Hoye et al. (2016) found that incentive-driven endorsements or testimonials hosted on company websites are perceived as less authentic and persuasive. Nonetheless, authentic positive WOM remains a powerful reputational buffer, offering resilience against negative exposure and reinforcing stakeholder trust (Van Hoye & Lievens, 2007).

When positive WOM is aggregated across employees to the organisational level, it contributes to the development of reputational capital, a key dimension of organisational social capital (Leana & van Buren, 1999), which in turn enhances overall organisational performance. Overall, I propose that employee satisfaction and positive WOM are positively associated with organisational performance, and that e-voice quantity influences organisational performance indirectly and positively through these two mediating mechanisms.

Hypothesis 4: E-voice quantity is indirectly related to organisational performance via (a) employee satisfaction and (b) positive WOM.

Finally, given that the effects of e-voice quantity on employee satisfaction and positive WOM are likely contingent on e-voice sentiment and content heterogeneity, I propose that a moderated mediation model, wherein the indirect relationship between e-voice quantity and organisational performance is moderated by these two dimensions. Specifically, more positive e-voice sentiment and greater content heterogeneity may amplify the influence of e-voice quantity on employee satisfaction and positive WOM. These elevated levels of satisfaction and advocacy, in turn, enhance organisational social capital, thereby strengthening the positive indirect association between e-voice quantity and organisational performance.

Hypothesis 5: E-voice sentiment moderates the positive indirect effect of e-voice quantity on organisational performance via (a) employee satisfaction and (b) positive WOM, such that the indirect positive effect is stronger when e-voice sentiment is higher.

Hypothesis 6: E-voice content heterogeneity moderates the positive indirect effect of e-voice quantity on organisational performance via (a) employee satisfaction and (b) positive WOM, such that the indirect positive effect is stronger when e-voice content is more heterogeneous.

3 Methods

3.1 Sample

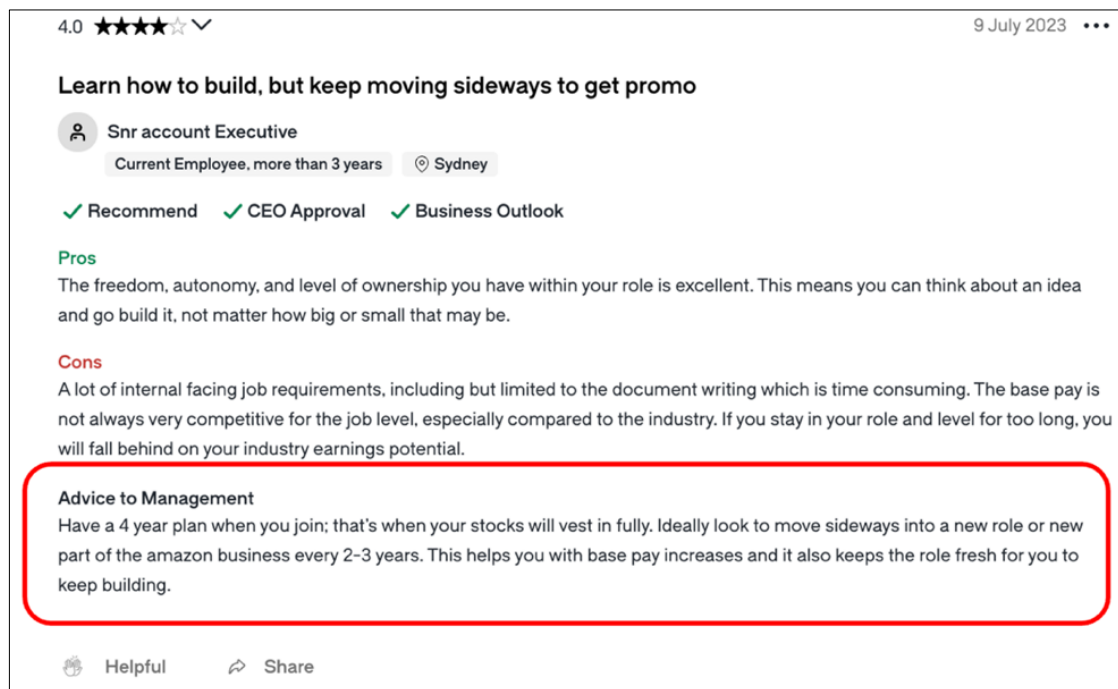
This study uses data from online employer review platform Glassdoor to operationalise voice. Glassdoor is a public social media platform where users can anonymously provide a company review as an employee (current and former), details on salary, interview experiences, and employee benefits. Protecting reviewer anonymity is at the core of their mission, while providing accountability by verifying users' identity. It was

launched in 2008, with a “vision to make positive workplace change through radical transparency” (Glassdoor, 2024) by creating a prosocial, safe space for professionals to share authentic feedback and engage in meaningful discussion. To do so, Glassdoor claims to ensure that companies cannot alter or remove reviews, and Glassdoor does not discuss details of their proprietary algorithm to ensure high-quality data integrity. Glassdoor is targeted at job seekers, employees and employers. Glassdoor established various safeguard practices to maintain review quality, contain more meaningful information than noise (Green et al., 2019; Huang et al., 2020).

Glassdoor has a ‘give-to-get’ policy where users are required to submit a piece of content (e.g., employer review, writing salary information, past interviews) on their personal experiences. Users are granted access to others’ content after offering their own content. When writing an employer review, employees are required to provide an overall satisfaction 5-point star rating of their company, employment status (e.g., full-time, part-time), review headline (in text), and pros and cons (in text) of their employer. This star rating is an overall employee satisfaction rating. Additional information on Glassdoor is provided in the Appendix.

Important for voice research, there is a text column in Glassdoor labelled ‘Advice to Management’ where employees (current and former) can give opinions, ideas, concerns, suggestions, or feedback about work-related issues (see Figure 4.3 below for screenshot).

Figure 4.3: Example of individual Glassdoor review



Note: Advice to management section highlighted.

3.2 Data collection

To analyse employee reviews, web scraping techniques were used on Glassdoor using Python libraries such as requests, BeautifulSoup, and Selenium to handle dynamic content. The scraping process involved parsing HTML elements, iterating through multiple pages, and storing the extracted information in a CSV file. Ethical considerations were strictly followed, ensuring compliance with Glassdoor's terms of service and protecting user anonymity. The dataset comprises individual reviews from current employees only, written between 2015 and 2019, for publicly traded firms located in the United States. Reviews from former employees were excluded to reflect e-voice behaviour that occurs while still within the organisational context. This aligns with the conceptualisation of e-voice as a discretionary, prosocial behaviour intended to contribute constructively.

The dataset comprised of 355 organisations and a total of 351,768 reviews provided between 2015 – 2019 with 'Advice to Management' sections completed. The data collection

was classified as ‘negligible risk research’ according to the NHMRC National Statement on Ethical Conduct in Human Research and thus did not require ethical review.

3.3 Data aggregation for organisational-level variables

Considering individual-level data were used at the organisational level, I aggregated individual-level data to construct organisational-level variables that reflect collective characteristics and emergent properties of organisations. This approach is consistent with multilevel theory in organisational behaviour and voice research, which recognises that organisational-level constructs can arise through various composition models, including direct, referent-shift and configural aggregation, depending on the nature of the construct (Chan, 1998; Kozlowski & Klein, 2000). By applying appropriate aggregation strategies to e-voice quantity, sentiment, content heterogeneity, employee satisfaction and positive WOM measures, I was able to capture both shared and diverse patterns of employee e-voice at the organisational level. This enabled an examination of how these organisational-level patterns relate to organisational performance.

3.3.1 E-voice quantity

To examine e-voice quantity as an organisational-level construct, I applied a density-based direct compositional model (Chan, 1998), where the organisational-level construct is derived from the frequency of individual-level behaviour scaled to the size of the organisation. This method assumes that e-voice is functionally isomorphic across levels, which refers to how the construct retains the same meaning at both the individual and organisational levels, and can be meaningfully represented by the proportion of employees engaging in e-voice behaviour. This enables comparison across organisations of varying sizes and captures the relative prevalence of e-voice expression within each organisational context.

3.3.2 E-voice sentiment

To examine e-voice sentiment at the organisational level, I applied a referent-shift compositional model (Chan, 1998), where organisational-level sentiment is assumed to reflect the collective emotional tone of employee voice contributions. While the sentiment originates from individual expressions, the construct of interest is the shared evaluative climate of the organisation, as inferred from the distribution of sentiment across employee reviews. This approach is appropriate for capturing emergent affective properties at the organisational level, particularly when the goal is to assess the overall tone of employee feedback rather than individual attitudes.

3.3.3 E-voice content heterogeneity

To examine e-voice content heterogeneity at the organisational-level, I applied a configural composition model, formed based on variability or distribution of individual-level attributes) in multilevel theory (Chan, 1998; Kozlowski & Klein, 2000). It was conceptualised as an emergent organisational-level property reflecting the diversity of topics raised by employees in their e-voice contributions. This aggregation method captures the dispersion of semantic content across e-voice, rather than consensus or central tendency, and is therefore aligned with configural composition models). Unlike compositional models that assume uniformity or shared perceptions, configural models allow for variability among individuals to represent a higher-level construct.

3.3.4 Employee satisfaction

To examine employee satisfaction at the organisational level, I applied a direct compositional model (Chan, 1998), where the higher-level construct (i.e., organisational-level employee satisfaction) is derived from the average of individual-level perceptions. The assumption underlying this model is that employee satisfaction is functionally isomorphic across levels, which refers to how the construct retains the same meaning at both the

individual and organisational levels. Aggregating via the mean is appropriate when the goal is to represent the general level of satisfaction within the organisation, and when the construct is expected to be relatively homogeneous across members (Kozlowski & Klein, 2000).

3.3.5 Positive WOM

To examine positive WOM at the organisational level, I applied a referent-shift composition model (Chan, 1998), which assumes that the construct of interest is inherently group-referenced, such as the organisation's attractiveness to outsiders. This approach is appropriate for capturing the collective promotional sentiment expressed by employees, which is often used by stakeholders and investors to assess organisational reputation and employee advocacy.

3.4 Measures

3.4.1 E-voice quantity

E-voice quantity was operationalised as the number of 'Advice to Management' reviews submitted for each organisation per year. Only current employees' reviews were selected, and these reviews had to have a date indicated. Reviews without a date were dropped (86 reviews). To create a proportionate measure, the number of e-voice quantity for each organisation was divided by the total number of employees within the organisation in that year (sourced from COMPUSTAT – a standardised North American and global organisational database for publicly traded firms) to account for variations in organisational size.

3.4.2 E-voice sentiment

Sentiment analysis was conducted using the Python library `tweetnlp`. In general, sentiment analysis, also known as opinion mining, is a computational study of people's attitudes, opinions and emotions toward an entity, which can represent individuals, events or

topics (Wankhade et al., 2022). It is a method used to investigate the emotional intent or nuanced emotions in text (Kiliç & Çadirci, 2022) by locating opinions, identifying sentiments and subsequently, classifying their polarity (Medhat et al., 2014).

In this classification process, each review was first allocated a sentiment score (neutral, positive or negative) (refer to Appendix A for individual review examples). In the aggregate sentiment, each review was classified as neutral, positive or negative based on the highest scoring sentiment category. Next, each review was assigned 0 if neutral, +1 if positive, and -1 if negative. The scores were then averaged on the organisation-year level. Scores range between -1 to +1.

3.4.3 E-voice content heterogeneity

To measure e-voice content heterogeneity, topic modelling was first conducted to identify the topics that were discussed in the reviews and its distributions across these reviews. Topics are themes or patterns of co-occurring words that frequently appear together in a collection of documents (i.e., reviews). Topic modelling is an unsupervised machine learning method that is used to uncover latent semantic structures in text that is not immediately apparent to human readers and provides a means for organising and summarising large amounts of text data (Barde & Bainwad, 2017). It is used in a variety of applications, including information retrieval, recommendation systems and sentiment analysis. It has been used in social sciences, humanities and other fields to analyse large sets of qualitative data and uncover hidden patterns or structures (Boyd-Graber et al., 2017).

Topic modelling was conducted using BERTopic, a topic modelling technique that uses advanced natural language processing (NLP) methods. It leverages transformer-based embeddings to identify coherent topics in textual data (Grootendorst, 2022). Each review is assigned a distribution over a set of topics, indicating the relative weight of each topic within that review. This state-of-the-art natural language processing model is trained with a large

corpus of text data and can capture the nuances and complexities of natural language (Devlin et al., 2019). It has been used to explore language-based data in multiple domains, including health technology, customer feedback and corporate trends (Jeon et al., 2023; Okazaki & Takahashi, 2022; Ponay, 2022). Unlike traditional topic modelling methods, such as Latent Dirichlet Allocation (LDA), which rely on term frequency-inverse document frequency (TF-IDF) or other ‘bag-of-words’ representations of the text, BERTopic analyses the semantic relationships between words and the context in which they appear, resulting in more accurate and meaningful topic clusters.

The initial dataset comprised a total of 355 firms and 351,768 reviews with ‘Advice to Management’ sections filled out. First, ‘Advice to Management’ that are None, null, N/A, or with other similar meanings were automatically filtered out by pandas’ read_csv function. 301 companies and 347,305 reviews remain. Next, proper nouns including company names and other forms that appear frequently (e.g., Abercrombie and A&F) were removed from the text. There were 665 of these proper nouns removed. Next, all text was converted to lowercase. From 347,305 reviews, 636,749 sentences were obtained. The reviews were broken down into sentences using the NLTK library (sent_tokenize function). Each document was assigned one topic as identified by the topic modelling algorithm. Initially, 280 topics were identified, with 181,980 sentences as outliers. Subsequently, topics that were similar were merged. After merging, 243 topics remained. 20 topics were removed as these were irrelevant (e.g., ‘none’, ‘good work’, ‘no advice’). 223 remaining topics were used to calculate content heterogeneity (refer to Appendix B for examples of topics generated).

Following Corritore et al. (2020), content heterogeneity was calculated using the mean Jensen-Shannon (JS) divergence between topic distributions across all unordered pairs of reviews (i, j) for each firm-year, formally:

$$InterH = \frac{\sum_{i,j} JS(p_i p_j)}{\sum_{i,j}}, \text{ for all } \{i, j | i < j\}$$

where the JS divergence between the two probability distributions is defined as:

$$JS(p_i, p_j) = \frac{1}{2}KL(p_i, M) + \frac{1}{2}KL(p_j, M)$$

and where $M = \frac{1}{2}(p_i + p_j)$ and $KL(p_i, M)$ is the Kullback-Leibler divergence of M from p_i :

$$KL(p_i, M) = \sum_{c \in C} p_i(c) \log_2 \frac{p_i(c)}{M(c)}$$

The JS divergence is a statistical measure used to quantify the difference between two probability distributions. It provides a symmetric and bounded measure of divergence (Kingetsu & Hamasuna, 2021), making it ideal for comparing topic distributions. It is useful for examining natural language processing and has been used in other studies on cultural heterogeneity previously (Goldberg et al., 2016). The JS divergence equals zero when the two distributions are identical and increases as they diverge, with a maximum score of 1. A larger divergence score indicates a greater diversity of topics that the reviews collectively covered per firm per year. A lower divergence score indicates a narrower range of topics. The underlying assumption is that greater e-voice content heterogeneity reflects a broader spectrum of perspectives and organisational issues.

3.4.4 Employee satisfaction

Employee satisfaction was measured using employees' ratings of their overall satisfaction with their organisation, ranging from one star (i.e., the worst) to five stars (i.e., the best). Following Chi and Chen (2021), average ratings were aggregated annually at the organisational level, indicating overall employee satisfaction with the organisation.

3.4.5 Positive WOM

Positive WOM was calculated by the proportion of reviews, which indicated a recommendation of their organisation for each year. Reviews indicating 'recommend' were

labelled as ‘promoters’, while reviews indicating ‘do not recommend’ were labelled as ‘detractors’, and other reviews without a response to this section were labelled as passives. This is consistent with the calculation of the Net Promoter Score, a widely used metric for enabling potential stakeholders and investors in their decision-making (Baehre et al., 2022). Drawing from this literature, positive WOM was formally calculated by:

$$\text{Positive WOM} = \% \text{ of Promoters} - \% \text{ of Detractors}$$

Higher positive WOM values indicated a larger proportion of employees are likely to recommend an organisation to others.

3.4.6 Organisational performance

To obtain annual organisational-level financial information, archival data were retrieved from COMPUSTAT which contains global financial database for publicly traded firms. Relevant variables included the annual number of employees, fiscal year-end price, outstanding common shares, total assets, and total common equity. Company names from Glassdoor were manually matched with stock ticker symbols to ensure accurate linkage with COMPUSTAT data.

Firm financial performance was measured using Tobin’s Q. Since the firms examined within this dataset are public companies, Tobin’s Q is a ratio score that assesses the overvaluation or undervaluation of a company in the stock market (Morck et al., 1988). If the Tobin’s Q is > 1 , it suggests that the market values the firm higher than the cost of replacing its assets. This could indicate the firm is overvalued. Conversely, if Tobin’s Q is < 1 , it suggests that the market values the firm lower than the cost of replacing its assets, which could indicate undervaluation. Higher Tobin’s Q ratios suggest the company is effectively using its assets to generate market value, indicating efficient investment decisions, effective resource allocation, and so on, which contribute to positive firm performance.

Following Klapper and Love (2004), Tobin’s Q was calculated as:

$$Tobin's\ Q = \frac{((PRCCF \times CHSO) + AT - CEQ)}{AT}$$

where PRCC_F is the annual closing stock price, CSHO is the number of common shares outstanding, AT is total assets, and CEQ is total common equity. A Tobin's Q greater than 1 indicates overvaluation, while a value below 1 suggests undervaluation.

4 Results

4.1 Preliminary analysis

To justify aggregation of individual-level variables to the organisational level, intraclass correlation coefficients (ICCs) were computed using a one-way random effects ANOVA. For employee satisfaction, the analysis indicated significant between-organisation variance, $F(300, 108669) = 28.33, p < .001$. ICC(1) was .07, suggesting that 7% of the variance in individual satisfaction scores was attributable to organisational membership, and ICC(2) was .96, indicating high reliability of organisational-level means. For e-voice sentiment, the ANOVA also revealed significant between-organisation variance, $F(299, 108669) = 6.43, p < .001$. ICC(1) was .02, reflecting minimal variance explained by organisations, whereas ICC(2) was .84, suggesting good reliability of aggregated sentiment scores despite low between-group variance.

4.2 Descriptive statistics, standard deviations and correlations

Table 4.1 presents the means, standard deviations, and correlations among the study variables. The correlations support the proposed relationships. For example, e-voice quantity was positively correlated with positive WOM ($r = .08, p < .01$) and organisational performance ($r = .21, p < .01$). Employee satisfaction ($r = .11, p < .01$) and positive WOM ($r = .16, p < .01$) were also significantly positively correlated with organisational performance.

4.3 Hypothesis testing

Following recommendations by Preacher et al. (2010), a multilevel path analysis was conducted using Mplus version 8.4 (Muthen & Muthen, 1998-2019) applying full maximum likelihood (ML) estimation. Multilevel path analysis involves the conceptual integration of variables originating from different levels. Although some variables (e.g., employee satisfaction) were originally measured at the individual level, all variables were aggregated to the organisation-year level to align with the study's organisational-level focus. This approach is consistent with multilevel theory, which supports the emergence of collective constructs from individual-level data (Chan, 1998; Kozlowski & Klein, 2000). To account for temporal precedence and reduce concerns of reverse causality, a three-year lagged design was employed. In initial consideration of directionality and causality, I explored a cross-lagged model using the available five-year data. However, due to limitations in data completeness and model convergence issues, particularly related to uneven distribution of reviews and missing data across time points, the cross-lagged model did not yield interpretable or stable results. As a result, I decided to use a three-year lag was based on both theoretical rationale and data structure considerations. While five years of data were available, the three-year lag was chosen to ensure a balanced panel and sufficient sample size across all variables and time points. Using a full five-year cross-lagged design would have significantly reduced the number of usable cases due to missing data and uneven review distribution across years. The three-year lag allowed for a more stable and interpretable model while still capturing temporal dynamics, allowing for a more robust and balanced panel across organisations and years. To further address potential reversed causality and endogeneity, I included employee satisfaction and positive WOM at Time 1 as control variables in all analyses. This approach accounts for baseline levels of these variables, helping to isolate the effect of e-voice quantity on subsequent changes in employee satisfaction and positive WOM over time. While this

approach does not fully address bidirectional causality, it provides a theoretically grounded and statistically stable framework for examining temporal relationships.

At the organisational level, one-year time lags reflect collective perceptions and reputational shifts that typically take time to form and stabilise. Prior research suggests that organisational responses to employee input and reputation effects often unfold over extended periods rather than immediately (Corritore et al., 2020; Kim & Cho, 2023). Moreover, studies on reputation momentum and organisational change indicate that multi-year lags may be necessary to capture meaningful effects (Kim et al., 2021; Evanschitzky et al., 2012).

E-voice quantity, sentiment, and content heterogeneity were measured at Time 1 (Year 1), employee satisfaction and positive WOM were measured at Time 2 (Year 2), and organisational performance was measured at Time 3 (Year 3). This longitudinal structure enabled a more rigorous test of the hypothesised indirect effects across time and supports stronger causal inferences.

As shown in Table 4.2, e-voice quantity had significant positive direct effects on (a) employee satisfaction ($b = .010, p < .05$) and (b) positive WOM ($b = .886, p < .05$). Thus, Hypothesis 1 was supported.

Table 4.3 presents the findings for moderation. Hypothesis 2 proposed that e-voice sentiment moderates the effects of e-voice quantity on (a) employee satisfaction and (b) positive WOM, such that these effects are more positive when e-voice sentiment is more positive.

E-voice sentiment significantly moderated the relationship between e-voice quantity and employee satisfaction ($b = .116, p < .05$) (see Figure 4.4). Simple slopes analysis (Aiken & West, 1991) revealed that for low e-voice sentiment, the relationship was negative and significant ($b = -.019, p < .05$). For high e-voice sentiment, the relationship was positive and significant ($b = .028, p < .05$).

Similarly, e-voice sentiment significantly moderated the positive relationship between e-voice quantity and positive WOM ($b = 6.316, p < .05$) (see Figure 4.5). For low e-voice sentiment, the relationship was negative and not significant ($b = -.663, ns$). For high e-voice sentiment, the relationship was positive and significant ($b = 1.912, p < .05$). Therefore, Hypothesis 2 was supported.

Hypothesis 3 proposed that e-voice content heterogeneity moderates the relationships between e-voice quantity and (a) employee satisfaction and (b) positive WOM, such that the relationships are more positive when e-voice content heterogeneity is higher. Results showed no significant interaction effects for employee satisfaction ($b = .37, ns$) or positive WOM, ($b = 9.983, ns$), thus Hypothesis 3 was not supported.

Table 4.1: Descriptive statistics, standard deviations and correlations

Variables	<i>M</i>	<i>SD</i>	<i>N</i>	1	2	3	4	5	6
1 E-voice quantity	3.64	3.53	1298	--					
2 E-voice sentiment	.11	.20	1306	.04	--				
3 E-voice content heterogeneity	.15	.04	1261	-.07*	.06*	--			
4 Employee satisfaction	3.57	.50	1131	.02	.21**	.08*	--		
5 Positive WOM	27.84	31.83	1130	.08**	.23**	.03	.75**	--	
6 Organisational performance	1.88	1.18	707	.21**	.06	.02	.11**	.16**	--

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

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

Abbreviations: *M*, mean; *SD*, standard deviation; *N*, sample size.

Note: All variables are calculated at the organisational level to align with the study's unit of analysis

Table 4.2: Summary of path coefficients from direct path analyses

IV	Outcome	<i>b</i>
E-voice quantity	Employee satisfaction	.01*
E-voice sentiment		.675*
E-voice content heterogeneity		.626*
E-voice quantity	Positive WOM	.886*
E-voice sentiment		33.36*
E-voice content heterogeneity		13.47

Note: * Correlation is significant at the 0.05 level (2-tailed).

Abbreviation: IV, independent variable.

Table 4.3: Summary of moderation for e-voice dimensions on employee satisfaction and positive WOM

IV	Moderator	Outcome	B
E-voice quantity	E-voice sentiment	Employee satisfaction	.116*
		Positive WOM	6.316*
	E-voice content heterogeneity	Employee satisfaction	.148
		Positive WOM	9.983

Note: * Correlation is significant at the 0.05 level (2-tailed).
 Abbreviation: IV, independent variable.

Table 4.4: Summary of indirect effects for mediation

IV	Mediator	Outcome: Organisational performance		
		Indirect effect	95% CI	
			LL	UL
E-voice quantity	Employee satisfaction	-.001	-.006	.003
E-voice sentiment		-.069	-.314	.166
E-voice content heterogeneity		-.046	-.361	.173
E-voice quantity	Positive WOM	.007	.002	.015
E-voice sentiment		.264	.074	.501
E-voice content heterogeneity		.089	-.247	.507

Abbreviations: CI, confidence interval; IV, independent variable; LL, lower limit; UL, upper limit.

Table 4.5: Summary of conditional indirect effects for moderated mediation with e-voice sentiment

IV	Mediator	Moderator	Outcome: Organisational performance		
			Indirect effect	95% CI	
				LL	UL
E-voice quantity	Employee satisfaction	-1SD	.001	-.006	.009
		Mean	.000	-.003	.002
		+1SD	-.002	-.012	.008
	Positive WOM	-1SD	.002	-.008	.014
		Mean	.013	.003	.026
		+1SD	.024	.007	.045

Abbreviations: CI, confidence interval; IV, independent variable; SD, standard deviation; LL, lower limit; UL, upper limit.

Figure 4.4: Moderation effect of e-voice sentiment and e-voice quantity on employee satisfaction

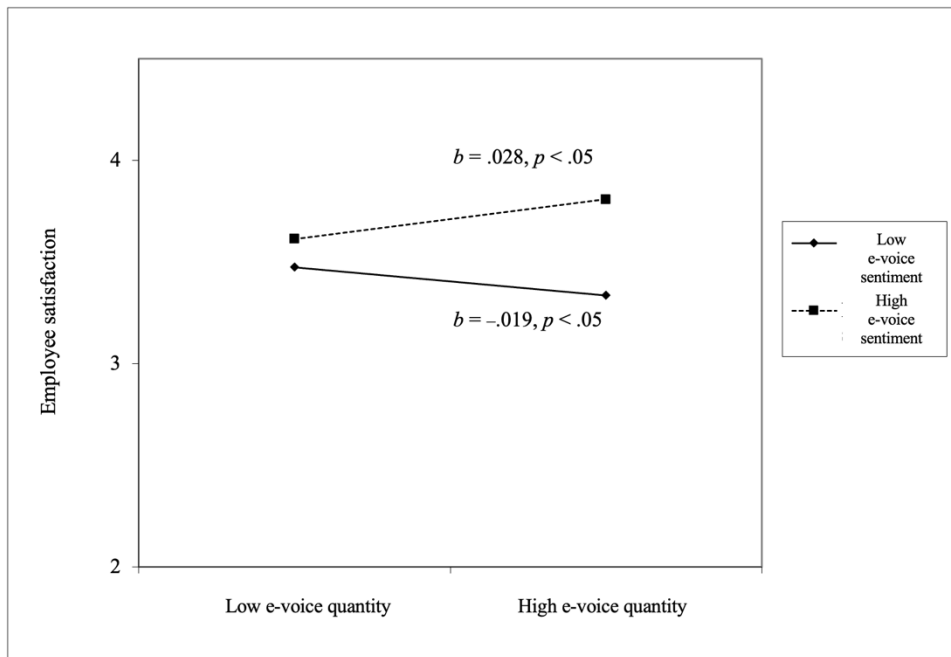
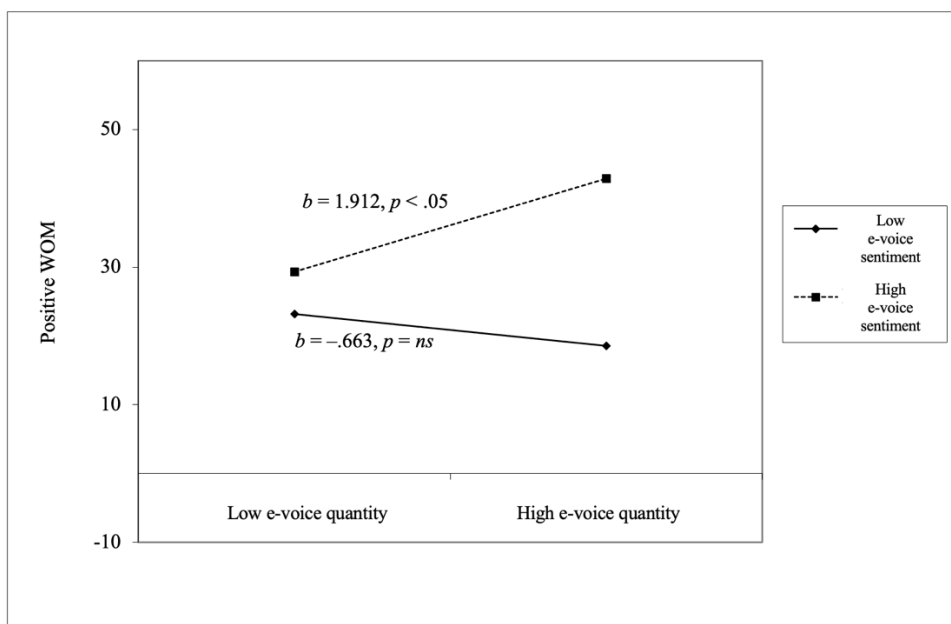


Figure 4.5: Moderation effect of e-voice sentiment and e-voice quantity on positive WOM



As reported in Table 4.4, Hypothesis 4 proposed that e-voice quantity is indirectly related to organisational performance via (a) employee satisfaction and (b) positive WOM. A Monte Carlo confidence interval for the indirect effect (Preacher & Selig, 2012) showed that the indirect effect between e-voice quantity and organisational performance via employee satisfaction ($b = -.001$, 95% CI $[-.006, .003]$) was not significant, therefore, Hypothesis 4a was not supported. However, the indirect effect via positive WOM ($b = .007$, 95% CI $[.007, .002]$) was significant, supporting Hypothesis 4b.

Table 4.5 presents results for moderated mediation. Hypothesis 5 proposed that e-voice sentiment moderates the positive indirect effect of e-voice quantity on organisational performance via (a) employee satisfaction and (b) positive WOM, such that the indirect effect is more positive when e-voice sentiment is higher. Results show that the positive indirect relationship between e-voice quantity and organisational performance via employee satisfaction was not significant. The conditional indirect effects of e-voice quantity on organisational performance via employee satisfaction were examined at low (-1 SD), mean (0 SD), and high ($+1$ SD) levels of e-voice sentiment. For Hypothesis 5a, the indirect effect via employee satisfaction was non-significant across all levels of e-voice sentiment (low: $b = .001$, 95% CI $[-.006, .009]$; mean: $b = .000$, 95% CI $[-.003, .002]$; high: $b = -.002$, 95% CI $[-.012, .008]$). The index of moderated mediation was calculated to test whether the mediation effect of e-voice quantity on organisational performance via employee satisfaction varied as a function of e-voice sentiment. The index of moderated mediation was also non-significant ($b = -.007$, 95% CI $[-.049, .032]$), thus Hypothesis 5a was not supported.

For Hypothesis 5b, the indirect effect via positive WOM was significant at the mean ($b = .013$, 95% CI $[.003, .026]$) and high levels ($b = .024$, 95% CI $[.007, .045]$) of e-voice sentiment, but not at low levels ($b = .002$, 95% CI $[-.008, .014]$). The index of moderated

mediation was positive and significant ($b = .050$, 95% CI [.010, .112]), supporting Hypothesis 5b.

Additionally, exploratory analysis revealed that when positive WOM was not included as a parallel mediator, e-voice sentiment moderated the positive relationship between e-voice quantity on organisational performance via employee satisfaction.

Hypothesis 6 proposed that e-voice content heterogeneity moderates the positive indirect effect of e-voice quantity on organisational performance (via (a) employee satisfaction and (b) positive WOM). No significant indirect effects were observed for either pathway; thus Hypothesis 6 was not supported.

5 General discussion

5.1 Summary of key findings

This study examined how organisational-level e-voice, specifically its quantity, sentiment, and content heterogeneity, influences organisational performance via employee satisfaction and positive WOM, drawing on affordance theory and organisational social capital theory. Several key findings emerged from the analyses.

First, there were positive associations between e-voice quantity and the outcomes of employee satisfaction and positive WOM, supporting Hypothesis 1. This suggests that higher levels of e-voice from a more vocal workforce and more positive WOM.

Second, support was found for the moderating role of e-voice sentiment. As proposed in Hypothesis 2, e-voice sentiment strengthened the positive effects of e-voice quantity on both employee satisfaction and positive WOM. At high levels of sentiment positivity, the relationships between e-voice quantity and both mediators were significantly stronger. These findings emphasise the importance of message valence in amplifying the impact of e-voice.

In contrast, e-voice content heterogeneity did not moderate these relationships, thus Hypothesis 3 was not supported. The lack of support may stem from the complex and nuanced nature of content heterogeneity, which can be difficult to capture through automated topic modelling alone. Although content heterogeneity theoretically reflects idea richness and diversity (Huang et al., 2020), it may not always translate into higher satisfaction or more positive WOM. Stakeholders may find highly varied content harder to interpret or act upon, thereby diminishing its positive effect. Additionally, stakeholders may prioritise message valence (sentiment) over diversity when forming evaluative judgments.

Third, mediation analyses revealed a significant indirect effect of e-voice quantity on organisational performance via positive WOM, supporting Hypothesis 4b. However, the indirect path through employee satisfaction was not significant, and thus Hypothesis 4a was not supported. These findings suggest that while employee satisfaction remains conceptually important, it did not serve as a statistically significant pathway through which e-voice quantity influenced organisational performance in this context. This may be attributed to the affective and subjective nature of satisfaction ratings on Glassdoor, which could be influenced by isolated or transient experiences, thereby limiting their predictive validity for performance indicators such as Tobin's Q. Although this study employed a time-lagged design, it is possible that the influence of employee satisfaction unfolds through more diffuse or conditional pathways that were not captured in the current model. Moreover, other influencers of change in subsequent satisfaction levels and organisational performance may not have been accounted for, including leadership, organisational culture, and employee turnover rates.

Fourth, the study found evidence for moderated mediation. Specifically, Hypothesis 5b was supported: e-voice sentiment moderated the indirect relationship between e-voice quantity and organisational performance via positive WOM. The index of moderated

mediation was significant, and conditional indirect effects revealed that this relationship strengthened as sentiment became more positive. Specifically, the moderated mediation effect is stronger at higher levels of e-voice sentiment, highlighting the importance of sentiment in amplifying the impact of e-voice quantity on organisational performance by mobilising social capital. These findings highlight the role of sentiment in mobilising social capital and suggest that positive sentiment amplifies the influence of e-voice on performance by reinforcing external stakeholder perceptions. In contrast, Hypothesis 5a was not supported. Although e-voice sentiment moderated the direct effects of e-voice quantity on satisfaction, the full indirect pathway to performance via satisfaction did not reach significance. This suggests that positive sentiment may enhance perceptions of satisfaction, but this satisfaction does not translate into performance outcomes, possibly due to the disconnect between affective responses and tangible firm outputs. It may also indicate that sentiment may operate as a signal to external audiences rather than a mechanism that enhances internal cohesion or commitment, thereby explaining the stronger results for positive WOM over satisfaction pathways.

Similarly, Hypothesis 6 was not supported, as e-voice content heterogeneity did not significantly moderate the indirect effects of e-voice quantity on organisational performance. This result aligns with the earlier finding for Hypothesis 3 and suggest that content heterogeneity may be more difficult to assess and interpret on external platforms such as Glassdoor (which may also reflect limitations of the data). While greater content heterogeneity might reflect a broader spectrum of concerns and ideas, it may also appear fragmented or incoherent, thereby diluting its perceived value. For external stakeholders (e.g., job seekers or investors), the tone and volume of voice may be more salient than content complexity in shaping reputation and evaluations of organisational performance.

Additional exploratory analyses revealed that e-voice sentiment had significant direct effects on both employee satisfaction and positive WOM, while e-voice content heterogeneity was significantly related to employee satisfaction but not to positive WOM. Furthermore, only e-voice sentiment demonstrated a significant indirect effect on organisational performance via positive WOM. No other indirect pathways via employee satisfaction or involving content heterogeneity were significant. Finally, to test for potential reverse causality, cross-lagged analyses were conducted. Results indicated that e-voice at Time 1 significantly predicted employee satisfaction at Time 2. However, the reverse path – from employee satisfaction at Time 1 to e-voice at Time 2 – was not statistically significant. Also, results indicated that e-voice quantity at Time 1 significantly predicted positive WOM at Time 2. However, the reverse path – from positive WOM at Time 1 to e-voice quantity at Time 2 – was not statistically significant. These findings support the theorised direction of influence, suggesting that e-voice behaviours precede and shape employee outcomes, rather than the reverse.

5.2 Theoretical implications

This study offers three theoretical contributions to the voice literature by advancing understanding of how digital contexts shape e-voice expression and its organisational consequences.

As the first key contribution, I extend voice research by foregrounding digital contexts as a domain in which voice is collectively expressed and has implications at the organisational level. Building on calls for more research into e-voice (Kalfa & Budd, 2020; Klaas et al., 2012), this study responds to the growing relevance of e-voice on social media as an important but under-researched source of employee voice. While prior voice studies have largely focused on face-to-face communication and within organisational boundaries, this study focuses on e-voice on external platforms as a meaningful and measurable expression of

voice. In doing so, this study expands the theoretical lens through which voice is understood, moving from interpersonal interactions to digitally mediated, externally visible communication that shapes organisational performance.

This study also contributes to knowledge on organisational social capital theory (Leana & van Buren, 1999) through its application to the domain of digital voice. By demonstrating that e-voice quantity indirectly influences organisational performance through positive WOM, the findings offer new insight into how relational resources are built in digital spaces. E-voice platforms serve as digital infrastructures through which employees can share concerns, exchange knowledge and generate shared understanding, strengthening trust and connectedness within and beyond the organisation (Leonardi & Vaast, 2017; van Zoonen et al., 2014). Moreover, the findings show that the positive influence of e-voice is conditional on the sentiment of voice expressed: high volume alone is insufficient without tone. This reinforces recent work on the multidimensionality of social media content (Gopinath et al., 2014; Nisar et al., 2020) and positions positive e-voice sentiment as an externally oriented form of relational capital. As employees engage in positive voice with their networks, they strengthen employer branding, reputation and stakeholder engagement (Keeling et al., 2013; Uen et al., 2015), ultimately contributing to performance outcomes (Melián-González & Bulchand-Gidumal, 2016; Zhang et al., 2022).

This study also contributes a macro-level perspective to the voice literature by conceptualising e-voice as an organisational-level construct. While much of extant research has examined voice at the individual or team level, this study conceptualises e-voice as employee activities that can be aggregated to represent organisational-level communication norms and relational climate. This adds an important theoretical layer by linking employee participation on public digital platforms with organisational-level outcomes, including employee satisfaction, positive WOM and organisational performance. In line with Lam and

Mayer (2014), who demonstrated the value of aggregating individual voice to reflect collective voice within internal contexts, this study extends that logic to public, external platforms. By examining e-voice at the organisational level, this study helps bridge the micro–macro divide in voice research and provides a scalable framework for analysing voice in large online, ‘big data’ datasets.

5.3 Practical implications

This study offers several practical implications for organisations navigating increasingly digital and distributed work environments. As flexible arrangements such as hybrid and remote work become more deeply embedded post-COVID-19, it is critical that organisations acknowledge and manage how employees express their voice in digital contexts. Public platforms like Glassdoor offer a valuable yet underutilised source of insight into employee sentiment, engagement, and perceptions of organisational health.

Firstly, the findings reinforce the importance of e-voice as a mechanism for cultivating organisational social capital. Organisations should invest not only in internal digital platforms that support two-way digital communication (e.g., enterprise social networks) but also see value and utility in external platforms to surface trends, concerns and opportunities voiced by employees (Chin et al., 2020). Techniques such as natural language processing and sentiment analysis can help human resource and organisational development teams detect patterns in e-voice and respond with evidence-informed interventions. For example, recurring negative sentiment in Glassdoor reviews may indicate underlying issues in workplace culture or leadership that warrant proactive attention to improve retention and satisfaction (Corritore et al., 2020).

Organisations should also foster psychologically safe and inclusive digital environments that encourage open and constructive dialogue. Providing employees with accessible and non-retaliatory communication channels, both internally and externally, can

enhance their sense of belonging, contribution and legitimacy within the organisation (Aliberti et al., 2022). Internally, this supports the development of relational trust, cohesion and mutual support. Externally, it reinforces a culture of transparency and accountability. Positive e-voice sentiment paired with employee advocacy, such as positive WOM, can strengthen employer branding, attract prospective talent and reflect cultural health to stakeholders (Panagiotidou & Mihail, 2024).

Leaders should also be encouraged to incorporate multidimensional e-voice indicators into employee engagement strategies and organisational health dashboards. The study demonstrates that voice quantity alone is insufficient – its influence on outcomes also depends on accompanying sentiment. Accordingly, leadership teams and human resource professionals should also evaluate the valence and frequency of employee contributions across digital platforms (whether internal or external). For example, high volumes of voice with consistently negative sentiment may warrant intervention (Lee & Suh, 2020; Saks, 2006). Ongoing reviews of digital voice signals can support continuous improvement and more agile leadership responses to employee voice (Kollitz et al, 2022; Yu et al., 2025).

Taken together, these findings suggest that e-voice should be treated not as a peripheral concern, but as a strategic resource. When supported by digital practices and leveraging affordances provided by digital voice platforms, e-voice can strengthen organisational social capital and ultimately improve organisational performance (Yu et al., 2025).

5.4 Limitations and future directions

This study has several limitations, which are also opportunities for future research. First, the analysis was based on user-generated content from a single employer review platform Glassdoor. The dataset included only English-language reviews of U.S.-based organisations, predominantly from the technology, finance and large corporate sectors. This

focus may limit the generalisability of the findings to other industries, smaller firms, or non-Western contexts. Additionally, reviews on Glassdoor likely reflect a self-selected subset of employees who chose to engage with the platform, possibly only once, rather than a representative cross-section of the entire workforce using e-voice channels within organisations. Given the specific affordances of Glassdoor, the textual content analysed may reflect the perspectives of users who selected the platform based on its perceived utility. As such, the findings may not fully extend to other e-voice platforms with different features or user bases (Min et al., 2021). Nonetheless, this exploratory study provides valuable preliminary insights into how e-voice is expressed in digital environments. Future research should build on this by examining a wider range of e-voice platforms that offer different affordances and attract more diverse employee populations.

The analysis was also limited to publicly traded U.S.-based organisations with financial data available from the COMPUSTAT database. While COMPUSTAT is a widely recognised source of standardised financial information for listed firms, it has notable limitations. It primarily covers large, publicly traded companies, with limited representation of private or smaller enterprises, thereby constraining the generalisability of findings to the broader business population. Additionally, this focus may obscure industry-specific patterns in e-voice behaviour. For example, high employee turnover is a defining feature of the hospitality sector (Doğru et al., 2023) and may influence e-voice dynamics differently from more stable industries such as finance or manufacturing (Job Openings and Labor Turnover Survey, U.S. Bureau of Labor Statistics, 2023). These employment patterns likely affect the strength of intra-organisational relationships and, by extension, voice behaviours. Future research could adopt a sector-specific lens to investigate how industry context moderates the relationship between e-voice and organisational outcomes, particularly by comparing high-turnover and low-turnover environments.

I also acknowledge that this study does not account for any macro-level contextual factors, such as seasonal trends and broader economic conditions, that may have influenced organisational performance during the period of analysis. The data spanned from 2015 to 2019, a timeframe that encompassed global developments such as the U.S.–China Trade War (2018–2019) and sector-specific trends, including tightening labour markets in healthcare and rising investments in technological innovation and digital transformation (Liu & Woo, 2018). Additionally, while the study period precedes the COVID-19 pandemic, it is important to recognise that the pandemic has had a profound impact on how organisations and employees engage with digital tools. Changes such as remote work, accelerated digitalisation, and evolving communication norms have likely transformed how employees use e-voice platforms to express concerns, share feedback, and participate in organisational discourse (Blair et al., 2021; Min et al., 2021; Ryan et al., 2021). Nonetheless, the study’s use of a time-lagged design strengthens its methodological rigour by enabling the examination of both proximal and distal effects of e-voice – an advantage over cross-sectional designs, which may be less suitable for capturing longer-term organisational outcomes.

Moreover, although the primary model employed a temporally ordered structure and supported the hypothesised directionality, the absence of significant reverse effects should be interpreted with caution. Specifically, the results indicated that e-voice quantity significantly predicted employee satisfaction and positive WOM, whereas the reverse pathways were not statistically significant. While the use of a time-lagged design strengthens causal inference relative to cross-sectional approaches, organisational-level dynamics often unfold in iterative and reciprocal cycles. It remains plausible that prior levels of employee satisfaction or advocacy could shape subsequent e-voice activity, particularly in organisations with mature feedback systems or participatory cultures. However, the non-significant reverse mediation effects suggest that e-voice quantity may function more robustly as an antecedent, rather than

a consequence, of internal climate and stakeholder engagement. These findings provide preliminary support for the proposed causal direction, indicating that e-voice behaviours influence subsequent employee experiences rather than merely reflecting pre-existing affective states. This strengthens the internal validity of the hypothesised model and reduces concerns about endogeneity or reciprocal causality. However, more longitudinal panel design is needed to more deeply investigate potential bidirectional relationships and feedback loops between e-voice behaviour, employee satisfaction, positive WOM and organisational performance over time (Leszczensky & Wolbring, 2022).

To better capture more immediate organisational responses to organisational-level e-voice, shorter time lags, such as six months, can be examined in future studies. Certain organisational-level constructs, such as positive WOM or employee satisfaction, may fluctuate more rapidly in response to internal events, leadership changes, or external pressures (Wang, 2025). With increasing availability of high-frequency data (e.g., monthly Glassdoor reviews), researchers can apply fine-grained temporal analyses to examine how e-voice dynamics evolve and influence organisational outcomes in near real-time. Exploring alternative lag structures could also help disentangle short-term reactions from long-term employer reputational shifts (Kim et al., 2021), offering a more nuanced understanding of the temporal mechanisms underlying e-voice-performance relationships.

Tobin's Q, as calculated using COMPUSTAT data, offers only an approximation of financial performance. COMPUSTAT does not provide direct measures of asset replacement cost, and thus book value is typically used as a proxy – an approach that may not accurately capture firm-specific investment profiles, particularly in sectors heavily reliant on intangible assets (Butt et al., 2023). Despite these limitations, Tobin's Q remains a widely accepted indicator of market-based organisational performance, especially relevant for assessing investment incentives, which e-voice may influence (Lindenberg & Ross, 1981). Future

research could enhance the robustness of performance assessment by integrating alternative or complementary financial metrics (e.g., return on assets [ROA], return on invested capital [ROIC] or ESG indices), validating findings across multiple datasets or applying industry-specific adjustments to better reflect intangible assets and cross-sector variations.

Additionally, expanding the sample beyond U.S.-based firms or incorporating non-financial performance indicators may provide a more comprehensive understanding of how e-voice shapes organisational outcomes.

One limitation of this study lies in the low ICC values observed for e-voice quantity, indicating limited within-organisation agreement and substantial variability in employee postings on Glassdoor. This challenges the assumption that e-voice, as captured through public digital platforms, reflects a shared organisational climate or consensus. Instead, the data suggest that e-voice in these contexts may be more reflective of decentralised, individual-level expressions than of cohesive organisational-level norms. This limitation extends to other constructs derived from Glassdoor reviews, including sentiment, content heterogeneity, employee satisfaction and positive WOM. While these variables were aggregated to the organisational level to examine between-organisation differences, the low ICC values suggest caution in interpreting them as indicators of shared perceptions. Future research could address this limitation by triangulating externally sourced e-voice data with internal organisational metrics (e.g., employee surveys, internal voice platforms) to assess convergence and enhance construct validity. Additionally, alternative aggregation strategies, such as reviewer credibility (e.g., word count thresholds, job department), may help capture more stable and representative organisational-level signals from decentralised data sources.

There are also limitations associated with the machine learning techniques employed. These textual models are primarily trained on Western linguistic and cultural norms. These models tend to be less sensitive to short text snippets and often struggle to interpret the

nuanced complexities of human language, such as irony, ambiguity, slang or cultural subtleties (Sharma et al., 2025). Consequently, more implicit or culturally nuanced expressions of voice, particularly common in non-Western contexts, may not have been fully captured. While the findings remain relevant for similar Western-oriented social media platforms, future research could explore e-voice content from alternative platforms that support diverse linguistic and stylistic expression (e.g., jobplanet.co.kr; Jung & Suh, 2019). In addition, researchers could enhance cross-cultural validity by developing sentiment analysis models specifically calibrated for multilingual and multicultural corpora, thereby better capturing culturally contingent voice behaviours, such as indirect or implicit expression styles prevalent in many Asian cultures (Lee & Song, 2024; Ren et al., 2022).

By only measuring positive WOM (i.e., favourable recommendation), thereby excluding neutral or negative forms of advocacy, this introduces a conceptual and empirical asymmetry. Employees may also engage in negative WOM, which despite its critical tone, can serve a constructive function by signalling dissatisfaction or catalysing organisational improvement (Lee et al., 2022; Melián-González & Bulchand-Gidumal, 2016). By omitting these broader expressions, the study may have underestimated the full spectrum of WOM dynamics and their potential effects on organisational performance. Nevertheless, this conceptual narrowing enabled a more focused investigation into the reputational and relational value of positive, voice-related advocacy. Future research could build on these findings by incorporating both positive and negative forms of WOM to enable a more nuanced understanding of how informal communication influences organisational outcomes across varying contexts.

Lastly, while Glassdoor provides a valuable and scalable source of employee insights, the validity of its overall rating metric warrants caution. The 1–5-star scale lacks clearly defined verbal anchors, unlike standardised Likert-type scales used in academic research

(e.g., 'very dissatisfied' to 'very satisfied'), potentially leading to inconsistent user interpretations and compromising construct validity. Furthermore, ratings on public review platforms may reflect consumer review norms rather than workplace-specific satisfaction standards. The unidimensional nature of the overall rating also limits dimensional validity, as it does not distinguish between different facets of job satisfaction (e.g., leadership, remuneration, organisational culture). Despite these limitations, prior research has shown that aggregated Glassdoor ratings can meaningfully reflect organisational climate (Canning et al., 2020; Khavis & Krishnan, 2021) and are moderately associated with employee engagement, internal relations and external reputation (Dube & Zhu, 2021), which are factors that may influence future organisational performance. Future studies may benefit from triangulating these ratings with internal employee surveys or employing multi-item satisfaction measures to enhance interpretive robustness and construct specificity.

5.5 Conclusion

In summary, this study extends voice research into the digital context by examining e-voice as an organisational-level phenomenon with strategic implications. By drawing from affordance perspectives and organisational social capital theory, the study demonstrates how organisational-level e-voice, particularly its quantity and sentiment, influenced positive WOM, employee satisfaction, and ultimately, organisational performance. These findings not only enrich our understanding of e-voice behaviour but also offer practical guidance for organisations navigating increasingly digitised and distributed workplaces. As such, this study forms a critical foundation for the thesis's broader inquiry into how voice operates across social, group, organisational and digital contexts.

Having provided deeper insight from a multi-contextual approach across three studies in the previous three chapters, I now turn to Chapter 5 to integrate insights across all three chapters, outlining overarching contributions, implications and directions for future research.

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Appendix

Appendix A: Examples of identified topics

Topic	Count	Name	Representation	Representative Docs
-1	181980	-1_employees_company_work_people	['employees', 'company', 'work', 'people', 'doing', 'pay', 'job', 'don', 'time', 'make']	['Take care of your employees', 'You get what you pay for.', 'Do more work']
0	33638	0_management_managers_upper_upper management	['management', 'managers', 'upper', 'upper management', 'manager', 'management needs', 'needs', 'management team', 'management management', 'level']	['KEEP THE SAME MANAGERS', 'less management', "Management can't do anything."]
1	15035	1_store_stores_store managers_retail	['store', 'stores', 'store managers', 'retail', 'store manager', 'store level', 'managers', 'manager', 'payroll', 'store management']	['Store managers put in many hours.', 'Without "all " managers the store manager would not be where he/she is!!', 'ALL over the store.']
2	11582	2_team_teams_team members_members	['team', 'teams', 'team members', 'members', 'work team', 'team building', 'team work', 'teamwork', 'team member', 'member']	['team.', "We're on the same team", 'we are all on the same team.']
3	10261	3_customer_customers_service_customer service	['customer', 'customers', 'service', 'customer service', 'employees customers', 'customers employees', 'focus customer', 'care customers', 'customer experience', 'focus']	['Customer always first', 'Keep the customer #1', 'customer service']
4	9596	4_technology_software_systems_tech	['technology', 'software', 'systems', 'tech', 'technical', 'techs', 'technicians', 'technologies', 'equipment', 'invest']	['Update technology.', 'Please do something about the systems!', 'upgrade the technology systems']
5	9488	5_talent_performers_retain_retain talent	['talent', 'performers', 'retain', 'retain talent', 'talented', 'good talent', 'talents', 'talented people', 'young talent', 'attract']	['This could help retain talent.', 'The talent is here.', 'Retain your talent.']

Note: Topics are identified using BERTopic Machine Learning Techniques

Appendix B: Examples of sentiment scores from individual reviews

Advice to Management	Sentiment	Negative	Neutral	Positive
'Stop hiring senior managers and higer ups and stop laying off technicians! Many groups are getting extremely top heavy. We need more entry level engineers and technicians. We need grunts to actually do all the work the Senior Management has been ideating. Value needs to shift to skillsets again and away from talking and filling out excel templates or this company will fail in the next ten years.'	Negative	0.820688068866729*	0.166093870997428	0.0132181085646152
'Be proactive, not reactive. Respect the employees who once made this company great. Don't manage by fear. Encourage, motivate, respect, and appreciate those you manage. Retire the "good ol' boys" at the top who still like to make and break those who don't agree with them. Get back to the basics and keep building on the foundation upon which 3M was founded: INNOVATION!'	Positive	0.0573139265179634	0.263519525527954	0.679166555404663*
'Figure out what you want the company to be and set a vision. If our historical brand of innovation by creative, dedicated employees is not not what will carry us into the future, what's is it?'	Neutral	0.0634079575538635	0.623346209526062*	0.313245803117752

* Maximum score across positive, negative, and neutral categories is used to contribute to organisational-level calculation of sentiment scores for analysis.

Note: Scores at generated from Python Library tweetnlp.

Chapter 5: General discussion

I began my thesis journey with the ambition to broaden our understanding of employee voice as a contextually embedded, multilevel phenomenon – one that unfolds dynamically across social, group, organisational and digital contexts. After comprehensively reviewing the literature, I was motivated by calls for more nuanced approaches to voice (e.g., Khan et al., 2025; Satterstrom et al., 2021), extending beyond traditional, dyadic conceptions of employee voice that focus primarily on upward voice within hierarchical relationships. Hence, the overall aim of my thesis was to investigate how voice is shaped by a wider array of contextual factors that influence how employees express, support and respond to voiced ideas in contemporary workplaces.

To explore these dynamics, the thesis addressed three core research questions across three empirical studies. Study 1 presented in Chapter 2 addressed the first research question to investigate the social context of voice, where I asked, “How do social actors, beyond the voicer, shape the trajectory and outcomes of the voice process through their enacted roles, as framed by role theory?”. To explore this question, I drew on role theory and conducted a narrative literature review to examine the roles of various social actors within the voice process. I synthesised existing literature to develop a role-based typology of voice roles, while also identifying significant gaps across domains such as social actor roles, contextual influences, voice processes, and methodological approaches.

Study 2 presented in Chapter 3 addressed the second research question to investigate the group context of voice: “How do group dynamics relating to information redundancy and group diversity influence individual promotive and prohibitive voice behaviour?”. To address this question, I conducted an experimental study using a vignette-based scenario design. This study investigated how group-level factors, specifically, information redundancy and group

diversity, influence promotive and prohibitive voice behaviour. Drawing on Parker et al.'s (2010) proactive motivational states framework, I proposed that these contextual variables shape promotive and prohibitive voice behaviour through two distinct proactive motivational mechanisms: 'reason to' (via diffusion of responsibility) and 'can do' (via voice self-efficacy) states. By manipulating information redundancy and group diversity through realistic workplace scenarios, I empirically tested their effects on individuals' likelihood of engaging in promotive and prohibitive voice.

Chapter 4 addressed the third research question to investigate the organisational and digital context of voice: "How does organisational-level voice expressed through digital platforms (e-voice) influence organisational outcomes, such as employee satisfaction, positive word of mouth and organisational performance?". To investigate this, I drew on affordance perspectives (Khan et al., 2023) and organisational social capital theory (Leana & van Buren, 1999) to investigate how organisational-level e-voice influences organisational outcomes through dual mechanisms – employee satisfaction and positive word of mouth – and how these, in turn, impact organisational performance. These relationships were empirically analysed with employee reviews on the employer review online platform Glassdoor. Using machine learning techniques, including sentiment analysis and topic modelling, I measured three dimensions of e-voice: quantity, sentiment, and content heterogeneity.

Collectively, the three studies presented in this thesis contribute to expanding the voice literature by examining a broader array of contexts and highlighting the complex interplay between individual, group, organisational and digital contexts in shaping voice behaviour. This final chapter synthesises the overall key findings from each study and discusses the overarching theoretical, methodological and practical contributions of the

thesis. This chapter concludes with an outline of limitations and important directions for future research.

1 Summary of key findings

1.1 The social context of voice

In Chapter 2, my examination of the social context of the voice process revealed that social actors, including employees, managers, and team members, play various voice-centric roles at different stages of the voice process. These dynamic roles are critical for advancing voiced ideas from initial expression to eventual implementation. As part of this narrative literature review, I synthesised findings from 268 publications to examine the role of different social actors in the employee voice process. In this study, I identified six key social actors: voicers, voice endorsers, voice solicitors, voice implementers, voice allies and voice bystanders. The diversity of these voice roles highlights the complexity and multilayered nature of organisational voice dynamics. A clear finding from the review was the dominant focus on the role of voicers, while other roles, such as voice bystanders, voice allies and voice implementers, have received limited attention in the literature.

Drawing on role theory and integrating it with Bashshur and Oc' (2015) Voice, Exit, Neglect, Punishment, Improvement, Loyalty progressive model, I developed a new role-based voice model that conceptualises voice as a socially embedded, multistage process. In this model, voice begins not with the act of speaking up, but with a 'voice opportunity' – a moment when input is invited or made possible. At this early stage, voice solicitors play a crucial role by signalling the need for input and creating space for expression, even before any voice is articulated. I also identified other key social actors involved in the voice process: voicers, voice endorsers, voice solicitors, voice implementers, voice allies and voice

bystanders. While previous research has focused heavily on the voicer, this review highlights that voice does not occur in isolation. Instead, it unfolds within a broader system of interdependent roles that collectively shape whether, how, and when voice is heard, endorsed or acted upon.

Managers featured prominently in the literature, most frequently in the roles of voice endorsers, voice implementers and voice solicitors. Their influence on the voice process was often tied to factors such as image threat, ego depletion, and their perceptions of the credibility and motivations of those speaking up. This reflects their positional authority and control over resources, which give them a central role in determining the outcome of voice attempts. Importantly, the review found that the nature of voice dynamics differs significantly between dyadic and team-based contexts. In dyadic settings, typically between an employee and their manager, voice processes tend to follow a more linear path, often beginning with the voicer and ending with a managerial response. These interactions leave limited room for the development, revision or amplification of voiced ideas. In contrast, team contexts revealed a more complex and distributed voice process. Team members often acted as voice allies who could revive dismissed ideas, voice amplifiers who increased the visibility of suggestions, or voice bystanders whose inaction could dampen the momentum of voice. These informal yet influential roles illustrate the socially embedded and evolving nature of voice in group settings.

Finally, the review emphasised the importance of voice implementers, those responsible for enacting voiced suggestions, in determining whether voice ultimately leads to meaningful organisational change. The findings collectively suggest that voice is best understood not as a single act or dyadic exchange, but as a distributed process shaped by a network of social actors whose roles influence how voice is expressed, supported and translated into outcomes over time.

1.2 The group context of voice

Chapter 3 investigated the group context of voice by examining how group dynamics, specifically, information redundancy and group diversity, influence promotive and prohibitive voice behaviour via dual mechanisms of diffusion of responsibility and voice self-efficacy.

Findings from the study revealed that the proactive motivational mechanisms linking information redundancy to voice behaviour, namely, diffusion of responsibility ('reason to') and voice self-efficacy ('can do'), varied by voice type and group diversity levels.

For promotive voice, diffusion of responsibility consistently mediated the relationship between information redundancy and voice behaviour, regardless of group composition. Voice self-efficacy, however, did not show significant mediation effects. This suggests that employees may feel less personally accountable for speaking up when information is already widely known, and this tendency remains stable across different team compositions. In contrast, voice self-efficacy demonstrated a significant moderated mediation effect, indicating that employees' confidence to speak up with promotive voice was shaped by the interaction between group diversity and information redundancy. In other words, employees were more likely to feel capable of voicing suggestions when both the informational and demographic context of the group supported it.

For prohibitive voice, a similar pattern emerged with diffusion of responsibility mediating the relationship across both low and high diversity groups, again highlighting the consistent influence of perceived shared responsibility in inhibiting voice. Voice self-efficacy, however, did not show significant mediation at either level of diversity. Nonetheless, the significant index of moderated mediation suggests that confidence to speak up about potential problems may still exert an indirect influence, shaped by the interplay between information redundancy and group diversity.

Although Monte Carlo comparisons indicated a descriptively stronger indirect effect of information redundancy on prohibitive voice via diffusion of responsibility, the difference across voice types was not statistically significant. Similarly, the indirect effects through voice self-efficacy were comparable between promotive and prohibitive voice, with no significant differences detected. These comparative findings suggest that, although certain mechanisms may appear more salient in high-risk voice contexts, their relative explanatory strength does not consistently vary across different types of voice behaviour.

Overall, diffusion of responsibility appeared to operate consistently across group contexts for both promotive and prohibitive voice, suggesting it is a robust ‘reason to’ mechanism influencing voice behaviour regardless of group composition. In contrast, voice self-efficacy, a key ‘can to’ mechanism, demonstrated greater sensitivity to contextual variation, particularly group diversity, reinforcing the value of a multilevel perspective in examining voice behaviour. The findings revealed nuanced patterns of moderated mediation for both voice types, emphasising that ‘reason to’ and ‘can do’ motivational states are not only distinct but also operate differently depending on the group context.

1.3 The organisational and digital contexts of voice

Chapter 4 investigated the organisational and digital contexts of voice by examining how organisational-level e-voice influenced organisational performance through dual mediators of employee satisfaction and positive word of mouth.

The findings in this study revealed that both the quantity and sentiment of e-voice positively predicted positive word of mouth, which in turn was associated with stronger organisational performance. Notably, the conditional indirect effects were significant at mean and high levels of sentiment, but not at low levels, suggesting that the influence of e-voice quantity on organisational performance via positive word of mouth was amplified when voice carried a more positive sentiment.

In contrast, employee satisfaction did not significantly mediate the relationship between e-voice and organisational performance in the moderated mediation model. While positive sentiment may enhance employees' perceptions of satisfaction, these affective responses did not translate into improved organisational performance, potentially due to a disconnect between internal employee experiences and external performance indicators. Even when employees feel satisfied, their ability to influence external outcomes depends on organisational responsiveness, decision-making processes and market conditions, which can dilute or buffer the satisfaction–performance link. E-voice content heterogeneity significantly increased employee satisfaction but was unrelated to both positive word of mouth and organisational performance. While content heterogeneity signals a psychologically safe and inclusive climate, which boosts satisfaction, it may not be sufficient on its own to influence positive advocacy behaviour or measurable organisational outcomes, particularly if the organisation does not strategically harness or act on the breadth of e-voice expressed.

These findings highlight the distinctive influence of digital platforms in shaping organisational outcomes, revealing that externally facing e-voice can play a pivotal role in enhancing organisational reputation and success by engaging both internal and external stakeholders. Overall, the results suggest that higher levels of e-voice, indicative of a more vocal workforce, are associated with greater employee satisfaction and increased expression of positive opinions about the organisation. In turn, these dynamics contribute to improved organisational performance. Together, the findings affirm the significance of digital voice expressions in shaping both internal experiences and external perceptions of the organisation, thereby validating the broader organisational impact of e-voice.

Taken together, the findings from the three studies offer robust empirical and conceptual support for the overarching proposition that voice is shaped by its surrounding context. Through this thesis, I advance theoretical understanding and provide practical

insights to help develop more inclusive, responsive and effective voice systems within organisations. The following section outlines the key contributions to knowledge and discusses the theoretical and practical implications of my research.

2 Integration of findings across chapters: A multi-contextual perspective on voice

This section synthesises the findings across Chapters 2, 3, and 4 to demonstrate how voice behaviour is shaped by individual roles, group-level dynamics, and organisational-level digital contexts. Together, these chapters contribute to a multi-contextual framework for understanding voice in contemporary workplaces.

Chapter 2 introduced a multi-role framework that reconceptualises voice as a distributed process involving voicers, voice endorsers, voice solicitors, voice implementers, voice allies and voice bystanders. These roles are not confined to individuals but can operate at the group or organisational level, offering a flexible lens for examining voice dynamics across contexts. The diversity of these voice roles highlights the complexity and multilayered nature of organisational voice dynamics. One finding was that team members often acted as voice allies who could revive dismissed ideas, voice amplifiers who increased the visibility of suggestions, or voice bystanders whose inaction could dampen the momentum of voice. The findings collectively suggest that voice is best understood not as a single act or dyadic exchange, but as a distributed process shaped by a network of social actors whose roles influence how voice is expressed, supported and translated into outcomes over time.

Chapter 3 built on this framework by empirically examining how voice is expressed in group contexts, focusing on group diversity and information redundancy as key contextual variables influencing a member's decision to speak up. Diversity is not treated as a standalone topic but as a theoretically grounded group-level factor that shapes how voice is processed – particularly in relation to perceptions of voice endorsers and voice allies

introduced in Chapter 2. Findings from Chapter 3 highlight how group composition and informational context shape the confidence and perceived value of members' promotive and prohibitive voice contributions via voice-self-efficacy, often constrained by hierarchical dynamics.

Chapter 4 extended this inquiry by exploring how digital platforms afford opportunities for voice that transcend traditional hierarchies. This study introduces the concept of e-voicers – a novel sub-category of voicers – whose expressions are publicly visible and aggregated at the organisational level. This complements earlier chapters by shifting the focus from internal voice initiation to external voice visibility and its macro-level impact. Moreover, Chapter 3's insights into group diversity and voice uniqueness inform Chapter 4's examination of e-voice content heterogeneity, alongside e-voice quantity and sentiment. While e-voice quantity and sentiment were found to be significantly associated with organisational performance, content heterogeneity did not emerge as a significant factor. This finding suggests that the quantity and sentiment of e-voice may be more influential than the diversity of its content in shaping external perceptions and outcomes. Nonetheless, the conceptual link between diversity and external voice expression remains a valuable avenue for future research. I provide a novel lens to assess the informational value of e-voice at scale and its relationship to organisational performance.

Collectively, I offer a multi-contextual, multi-level understanding of voice behaviour – tracing its evolution from individual and group dynamics to digital expressions and organisational outcomes. This integrative perspective advances voice literature by demonstrating how voice is shaped and expressed across social, group, organisational and digital contexts. It demonstrates that voice is not a unitary phenomenon but a distributed, dynamic process. This challenges traditional dyadic or static models and encourages future research to adopt more integrative, multi-level frameworks. This reconceptualisation of voice

roles (beyond voicer and receiver) provides a richer vocabulary and analytical lens for understanding how voice is enacted, supported, or suppressed in organisations. This opens new avenues for theorising about the interplay of roles and the conditions under which voice is amplified or silenced. Table 5.1 provides a summary of its integration.

Table 5.1: Summary of integration of findings across chapters

	Key focus	Main findings	Insights	Built upon previous chapter(s)
Chapter 2: Social context	Theoretical foundation: Multi-role framework of the voice process	Voice is a distributed process involving social roles like voicers, voice endorsers, voice allies, voice bystanders, etc.	Voice is shaped by a network of social actors across individual, group and organisational levels.	-
Chapter 3: Group context	Empirical study of member promotive and prohibitive voice in group contexts (information redundancy and group diversity)	Group diversity and information redundancy influence member promotive and prohibitive voice via voice self-efficacy; hierarchical dynamics constrain voice.	Group composition and informational context shape confidence and perceived value of member promotive / prohibitive voice.	Operationalises roles from Chapter 2 (e.g., voice allies, voice endorsers) in group contexts.
Chapter 4: Organisational-level digital, digital context	Organisational-level digital voice (e-voice quantity, sentiment and content heterogeneity)	E-voice quantity and sentiment are significantly associated with organisational performance via voice self-efficacy; content heterogeneity is not.	Digital platforms afford voice visibility beyond hierarchies; internal diversity may manifest externally.	Builds on Chapter 3's insights into diversity and voice uniqueness; extends Chapter 2's voicer role to the digital context as e-voicers; specifically for organisational-level impact.

3 Key contributions to knowledge

The thesis made three key contributions to the voice literature by providing a contextualised perspective, advancing our multilevel understanding of the voice phenomenon, and adopting a diverse range of methods suited to examining voice across multiple contexts and levels.

3.1 Putting voice into context

The thesis contributes to the voice literature by adopting a contextualised perspective of the voice phenomenon, thereby advancing the conceptualisation of voice as a socially embedded process. In doing so, I respond to growing calls for more relationally and contextually grounded approaches to understanding voice behaviour. Through a contextual lens, this thesis illuminates the often-overlooked conditions under which voice is enacted and defines critical boundary conditions that shape the emergence and consequences of voice.

Chapter 2 focused on the social context, identifying multiple social actors – voicers, voice endorsers, voice solicitors, voice implementers, voice allies, and voice bystanders – who influence the trajectory of voice beyond the traditional dyadic interaction between the voicer and the authority figure. While much of the extant literature conceptualises voice as an independent decision made by a focal voicer at a single point of expression, I advance a more dynamic and interdependent understanding of voice as a process shaped by a network of actors involved in endorsing, soliciting, implementing or obstructing voiced ideas.

Chapter 3 examined the group context, demonstrating how contextual variables, specifically information redundancy and group diversity, affect individual decisions to engage in promotive or prohibitive voice. Although information redundancy is a common feature of modern work environments, it remains underexplored in voice research, with only a handful of studies addressing its role. By empirically examining this construct in group-based

settings, this study contributes new insight into how shared knowledge and group composition influence the psychological mechanisms underlying voice behaviour.

In Chapter 4, I explored the organisational and digital context, investigating how employee-generated e-voice, expressed through digital platforms, influences organisational outcomes. Specifically, it revealed that e-voice at the organisational level affects proximal outcomes such as employee satisfaction and positive word of mouth, which in turn influence distal outcomes like organisational performance. Despite the growing macro-level impact of digital voice, quantitative studies of e-voice in organisational contexts remain scarce. This study contributes to the literature by leveraging an affordance perspective, recognising that, unlike traditional in-person voice that depends on interpreting social cues, e-voice is shaped by perceived utilities of digital tools, such as visibility, persistence, and anonymity, which enable new forms of voice expression.

Taken together, I expand the contextual terrain of voice research by examining voice across social, group, organisational and digital domains. I bridge traditional understandings of in-person voice with the emergent dynamics of online voice, thereby contributing to a more comprehensive and multi-contextual understanding of how, when and why voice occurs in contemporary organisational life.

3.2 Multilevel nature of the voice process

The thesis advances a multilevel understanding of the voice phenomenon. Although voice is inherently a multilevel construct, much of the existing literature remains concentrated at the dyadic level, with limited attention to group-level and organisational-level dynamics. With three studies, the thesis addressed this gap by systematically examining voice across multiple levels and contexts: social, group, organisational and digital.

Chapter 2 contributes to the literature by reframing voice as a collective process involving multiple social actors, rather than a discrete, one-time event between a voicer and

authority figure. It highlights the interdependent roles of actors such as voice endorsers, voice implementers and voice bystanders in shaping the trajectory and outcomes of voiced ideas. These roles typically emerge in team or group settings, where interdependent relationships and social dynamics shape the voice trajectory. By shifting attention beyond the focal voicer to include the broader social structure within which voice occurs, this chapter foregrounds the collective, group-level processes that enable or inhibit the realisation of voice outcomes.

Chapter 3 extends this multilevel perspective by focusing on group-level contextual factors, specifically information redundancy and group diversity. By examining how these group dynamics influence individual promotive and prohibitive voice behaviours, I provide insight into how voice behaviour emerges not in isolation, but in response to shared knowledge structures and diversity within work teams, thus contributing to a richer understanding of voice as embedded within group-level dynamics.

In Chapter 4, I offer a novel contribution by adopting an organisational-level lens to examine how e-voice, as a digitally enabled collective phenomenon, influences organisational outcomes. To date, despite its growing relevance in digital work environments, to the extent of my knowledge, very limited research has quantitatively examined how e-voice translates into organisational consequences. Through the analysis of e-voice dimensions – quantity, sentiment and content heterogeneity – this study situates e-voice within an organisational-level framework and integrates digital affordances with collective outcomes.

By integrating insights across these chapters, I advance a more holistic understanding of voice as both a dyadic and collective phenomenon. I expand the analytical lens of voice research beyond the traditionally examined individual and dyadic levels to include underexplored group and organisational contexts. Moreover, I highlight the importance of situating voice within both in-person and digital environments, demonstrating how contextual features shape when, how and by whom voice is expressed.

3.3 Methodological contributions

This thesis makes a methodological contribution to the voice literature by employing a diverse range of approaches suited to examining voice across multiple levels and contexts, while also addressing its longitudinal and processual nature.

Chapter 2 adopted a process-oriented lens, conceptualising voice not as a one-off event but as a multi-stage phenomenon encompassing initiation, rejection, cultivation, and implementation. Rather than focusing solely on the individual voicer or dyadic voicer–supervisor interaction, through systematic categorisation and conceptual integration of previously fragmented empirical insights, this study offers a structured foundation for theorising voice as a dynamic, multistage process shaped by interdependent roles. It shifts the analytical focus from isolated acts of voice to a processual understanding that includes the social actors who influence whether and how voice is solicited, endorsed, implemented or ignored. By considering voice as unfolding through interactions across levels (individual, group and organisational), this chapter lays the groundwork for future empirical research to explore role-based mechanisms of voice facilitation.

Chapter 3 used experimental methods to determine causal relationships in the group context. While most voice studies rely on correlational or cross-sectional designs, this experiment enabled causal inference by manipulating contextual factors and isolating their effects on voice outcomes. This methodological approach advances voice research by adding rigour in testing how group-level contextual factors influence individual voice decisions – an area where experimental methods remain relatively underused.

Chapter 4 further extended the methodological scope of the thesis by analysing time-lagged organisational-level data derived from employee-generated reviews of employers on Glassdoor. I applied machine learning techniques, including sentiment analysis and topic modelling, to capture multidimensional aspects of e-voice, including its quantity, sentiment

and content heterogeneity. While most prior voice research focuses on the frequency of voice expressions in assumed in-person settings, this study addressed the methodological limitations of existing approaches by incorporating rich textual data and attending to the unique characteristics of voice in digital contexts. Especially at the organisational level, such dimensions are critical for understanding how e-voice functions as an organisational-level phenomenon and how it influences broader outcomes such as employee satisfaction, positive word of mouth and organisational performance.

Collectively, this thesis advances the methodological landscape of voice research in several important ways. First, by integrating framework conceptualisation, experimental manipulation, and computational analysis of digital data, it demonstrates the value of a multi-level, multi-contextual approach for capturing the complexity of voice behaviour. Second, the processual and role-based modelling introduced in Chapter 2 provides a foundation for future research to move beyond static or dyadic perspectives, encouraging the adoption of dynamic, process-oriented methodologies. Third, the combination of experimental methods and advanced machine learning techniques illustrates how causal inference and large-scale, real-world data can be leveraged together to yield richer, more generalisable insights. Fourth, this thesis directly addresses persistent methodological challenges in the field, such as ecological validity, aggregation, and causality, by transparently discussing limitations and providing practical solutions. Together, these methodological innovations encourage greater pluralism and rigour in organisational research, offering a roadmap for future studies to employ context-appropriate, innovative methods in the study of voice and related phenomena.

4 Practical implications

The findings offer several significant practical contributions. For practitioners, the integrated insights across the three studies provide actionable strategies for cultivating a

supportive voice culture. Employees can use these insights to better understand how to enhance the likelihood that their ideas will be heard and implemented, as well as identify the contextual factors, such as group composition, leadership dynamics or platform choice, that enable their voice to have the greatest impact. Likewise, managers and organisations can apply these findings to create environments that encourage voice, whether by fostering constructive social interactions, optimising team structures, or enabling safe and effective use of digital platforms for feedback and idea sharing (Kim et al., 2025).

4.1 Empowering voice across the process

Given that the goal of voice is often to implement ideas, I suggest it is crucial for employees to recognise the actions they can take at different stages to prevent the voice process from stalling, being reversed or abandoned altogether (Satterstrom et al., 2021). Awareness of the broader social and group contexts is key. Individuals at all levels, whether employees, team members or those in leadership, should remain mindful of their roles as either initiators of voice or as recipients and responders. Employees may benefit from assessing the potential challenges of speaking up, including carefully selecting whom to approach first. They should also reflect on the nature of the issue and consider why it may have remained unspoken. Evaluating group dynamics, such as diversity, and the broader organisational context can help employees identify when and where their voice is more likely to be acknowledged and acted on. For managers, creating psychologically safe environments, characterised by openness, confidentiality and transparency, and modelling constructive responses to voice can significantly enhance the likelihood that employee concerns are shared and addressed.

4.2 Building structures that enable voice

To further support voice within the organisation, leaders can implement clear and transparent guidelines outlining how voiced ideas are processed and what outcomes employees can reasonably expect. Initiatives such as open-door policies (Detert & Burris, 2007), clearly defined reporting channels and structured feedback loops (e.g., specifying who to approach, when and through which mechanisms) can reduce ambiguity around the voice process and encourage greater participation (Fischer et al., 2019). Creating environments grounded in trust and mutual respect, such as open forums or regular team feedback sessions, can further reinforce psychological safety. Additionally, engagement-focused initiatives like collaborative projects or employee recognition programs can signal that voice is not only welcomed but valued (Liang et al., 2023). Providing ongoing support for employees who speak up, whether through mentoring, follow-up discussions, or acknowledgement of their input, can strengthen a culture in which employee contributions are respected and acted on.

4.3 Developing voice-supportive capabilities

In addition to structural initiatives, I suggest targeted training programs can play a crucial role in strengthening an organisation's voice culture. Leaders and managers should receive training to become effective voice endorsers and implementers, helping to mitigate adverse reactions often driven by perceived threats to authority or personal discomfort (Burris, 2012; Fast et al., 2014). Equipping employees with communication skills to articulate their ideas clearly and confidently can reduce frustration associated with the 'deaf ear syndrome' and increase the likelihood that employee concerns are acknowledged and addressed (Brykman & Raver, 2021; Burris et al., 2022). Furthermore, fostering peer support through training can promote a culture in which voice is seen not as an individual act but as a shared responsibility. Encouraging employees to actively support one another's voice,

whether they speak up themselves, can contribute to collective commitment to idea implementation and organisational improvement (Chen & Treviño, 2022; Liu et al., 2022).

4.4 Harnessing digital platforms for voice

Organisations should remain attuned to the contexts in which voice is expressed, whether in person or via digital platforms, as these shape both the content and reach of voice (Leonardi & Vaast, 2017). To maximise the value of e-voice, organisations should foster a culture of transparency and promote managerial openness to digital platforms as legitimate voice channels (Khan et al., 2025; Leonardi et al., 2014). Rather than imposing restrictive measures that may erode trust, organisations can provide guidance on preferred digital platforms based on their affordances, such as anonymity, visibility or persistence (Mao & DeAndrea, 2019; Sharma & Bhatnagar, 2016). Acknowledging employees' needs for both in-person and digital forms of expression helps strengthen internal trust, expand communication networks and enhance confidence to speak up. In hybrid work environments, organisations can further support voice by facilitating structured opportunities, such as team-building events or cross-functional meetings, that cultivate interpersonal relationships and reinforce employees' connection to the broader organisational community (Bernauer & Kornau, 2022).

4.5 Monitoring and responding to e-voice

Finally, I suggest that organisations can take a proactive approach by monitoring e-voice content across both internal and external platforms to detect recurring themes, trends and inconsistencies. While individual expressions may appear inconsequential, their cumulative presence, especially in public digital spaces, can significantly influence organisational reputation and shape perceptions among external stakeholders (Hyman, 1989; Walker, 2021). By tracking e-voice quantity and sentiment, organisations can gain valuable insights into employee engagement, morale and areas requiring attention. These insights can

then guide timely, evidence-based interventions that support employee wellbeing and drive sustainable improvements in organisational performance.

5 Limitations and future research

While this thesis offers several methodological strengths, including its mixed-methods, multi-source design within a quantitative framework, it is not without limitations. I acknowledge the importance of recognising these limitations to interpret the findings accurately and guide future research.

5.1 Generalisability

First, I acknowledge that the generalisability of the findings is constrained by the specific contexts in which the studies were conducted. Although this research spans social, group, organisational and digital contexts, the insights may not apply equally across populations, industries or cultural settings (Tsang & Kwan, 1999). The social actors identified in Chapter 2, framed through a role-theoretic lens, are likely reflective of voice dynamics prevalent in Western, hierarchical or formally structured organisations. Given that role enactment is shaped by cultural and institutional norms, the typology developed in this review may not fully capture how voice roles manifest in more collectivist, egalitarian or informally governed environments (Johns, 2006; Whetten, 1989). For instance, in participatory cultures, voice solicitation may be distributed across peers or rotating team leads, whereas in more hierarchical contexts, this role may remain confined to formal authority figures. Similarly, as digital communication becomes increasingly embedded in organisational life, the behaviours of e-voicers and in-person voicers may diverge to the extent that they represent distinct social actors in future systems. Notwithstanding these limitations, the typology offered in this study provides a foundational framework for

examining voice roles across varied cultural and institutional contexts. It may serve as a valuable comparative tool for future research exploring how social, structural and technological environments shape the emergence and configuration of voice-related roles beyond those documented here.

Chapter 3 employed a vignette-based experimental design to manipulate information redundancy and group diversity. While this method offers strong internal validity and allows for causal inference, the use of hypothetical scenarios may not fully reflect the complexity, emotional salience and interpersonal dynamics of real-world organisational settings. As such, the generalisability of these findings to actual workplace behaviour may be limited (Shadish et al., 2002). Participants' responses in controlled, low-stakes environments may differ from their actions in settings marked by hierarchical pressures, established social norms or long-standing team relationships (Tsang & Kwan, 1999). Nonetheless, despite its hypothetical nature, this study provides important preliminary insights into how group-level informational and compositional variables shape voice behaviour. It offers a structured foundation on which future field experiments or longitudinal designs can build, enabling more ecologically valid examinations of voice processes as they unfold in natural organisational contexts.

Chapter 4 acknowledged that the organisational-level findings derived from user-generated data from Glassdoor may reflect industry-specific patterns and employee experiences that are not representative of all sectors or organisational types (Kosinski et al., 2015). The nature of the platform, often dominated by reviews about technology, finance and large corporate firms, may bias the insights toward some organisational cultures, workforce demographics or employment models (Yarkoni, 2020). As a result, the generalisability of the findings to other industries, smaller organisations or non-Western contexts may be constrained. Furthermore, the organisations examined are U.S.-based organisations, not fully reflective of organisations in other geographical locations. However exploratory, this study

provides valuable preliminary insight into how e-voice manifests within digital environments and influences organisational outcomes. It offers a foundation for future research to explore how online voice behaviours vary across different institutional and cultural settings.

Expanding this line of inquiry to include a broader range of industries and organisational structures, ideally through field studies, ethnographic observation or experience sampling, could strengthen external validity and enhance our understanding of e-voice in diverse contexts.

5.2 Other methodological limitations

I also acknowledge several other methodological limitations across the design of the studies. In Chapter 2, I applied rigorous quality criteria to ensure the reliability and conceptual clarity of the included studies. However, this methodological stringency may have introduced selection bias by excluding research published in non-English-language sources, less prominent journals or region-specific outlets (Synder, 2019). These constraints may have limited the diversity of methodological perspectives and excluded culturally embedded insights into voice processes. Nonetheless, while narrower in scope, this review offers a structured, theory-driven synthesis of some of the most conceptually rigorous contributions to the voice literature to date. It provides a strong conceptual foundation for future integrative work. Subsequent reviews may build on this by adopting broader inclusion strategies, such as incorporating grey literature, regionally diverse publications and non-English sources (Cronin & George, 2023), to construct a more comprehensive and globally nuanced understanding of social actors in the voice process.

In Chapter 3, although the vignette-based experimental design enabled the systematic manipulation of group-level variables, it constrained the richness, spontaneity and complexity of real-time team dynamics. My use of binary manipulations (i.e., high vs. low information redundancy; high vs. low diversity) may have oversimplified the nuanced ways these

contextual factors unfold in actual workplace settings (Aguinis & Bradley, 2014). From a data standpoint, the study relied on self-reported intentions to engage in voice rather than observed behaviour, introducing potential biases related to social desirability or hypothetical reasoning. Furthermore, while the participant pool was demographically diverse, it may not adequately reflect the experiences of employees across varied industries, organisational cultures or professional roles. Nonetheless, despite these methodological and data-related constraints, the study provides valuable causal insights into how teams' informational and compositional features shape employees' voice intentions. Future research could build on these findings by observing actual voice behaviour in naturalistic organisational settings and incorporating multi-source assessments, such as peer, supervisor or behavioural ratings, to enhance ecological validity and the generalisability of results.

In Chapter 4, the study's reliance on user-generated content from external review platforms introduces several notable data constraints. These include representational biases arising from the self-selected nature of voicers and the absence of detailed demographic or employment information (e.g., tenure, job function), which restricts the ability to capture the full range of employee experiences. Additionally, while sentiment analysis and topic modelling are powerful tools for processing large-scale textual data, these techniques may carry inherent algorithmic biases that compromise interpretive accuracy and fairness. Despite these methodological and data-related constraints, the study offers a meaningful contribution by demonstrating the utility of machine learning approaches in capturing collective voice at the organisational level. Future research could strengthen this line of inquiry by incorporating qualitative methods, such as interviews or focus groups, to triangulate and contextualise digital voice expressions. Furthermore, the adoption of fairness-aware natural language processing techniques (e.g., Venugopal et al., 2024) could enhance the sensitivity and inclusivity of sentiment analysis in future organisational voice research.

5.3 Future research avenues

This thesis offers a framework through the development of a role-based typology of social actors involved in the voice process and highlights the contextual factors, such as organisational structures and technological platforms, that shape voice dynamics. While this work marks an important step toward reconceptualising voice as a socially embedded and contextually shaped process, further research is needed to explore the complexities of these dynamics across different levels of analysis.

Future research could expand this work in several key directions. First, future research could meaningfully extend current understanding by examining how roles surrounding the focal voicer, such as voice endorsers, voice solicitors, voice implementers, voice allies and voice bystanders, are enacted and interact across various organisational contexts over time. For instance, further research examining team members roles as endorsers (Bain et al., 2021; Liu et al., 2022) could provide deeper insight for progressing voiced ideas at the group level. While much of the existing literature assumes that managers are the primary implementers of voiced ideas due to their formal authority and access to resources (Fast et al., 2014; He et al., 2020), implementation in practice can also be carried out by individual employees, teams or entire organisational units. This variation depends on factors such as the nature of the voiced issue, the stage of implementation (e.g., materialising, piloting, formalising) and the scale of employee impact (Satterstrom et al., 2021). Longitudinal or process-oriented methods could help uncover how voice roles and their effects evolve over time, particularly in response to organisational changes (Volkoff et al., 2007), leadership transitions or external shocks (e.g., COVID-19) (Wee & Fehr, 2021). By tracing the lifecycle of voiced ideas and the social actors that influence their progression or decline, future research could build a more dynamic understanding of voice as a multilevel, relational process rather than a one-time behaviour (Guarin et al., 2025).

Another important avenue for future research involves investigating how employees engage in voice across multiple communication modes, particularly through the combined or sequential use of face-to-face and digital platforms (Ghani & Malik, 2023). In contemporary hybrid and digitally networked work environments, it is increasingly uncommon for employees to rely on a single channel to express concerns or suggestions. Rather, they often draw on multiple modes of communication, such as direct conversation with a manager and posting feedback via digital systems, depending on the urgency, sensitivity, content and intended audience of the message. Future research could explore whether these forms of voice operate synergistically, enhancing message credibility, visibility or responsiveness, or whether they create tensions, such as conflicting cues or reduced message coherence (Parameswaran et al., 2022). For instance, it would be valuable to assess whether the combination of in-person and digital voice influences the perceived seriousness, legitimacy or follow-through of a voiced idea or feedback, or whether the sequencing and timing of communication modalities shape organisational responses. Moreover, examining how alignment or misalignment in tone, framing or content across voice channels affects message reception and influence would offer deeper insights into the effectiveness of multimodal voice and organisational outcomes (Pernkopf et al., 2020). Such research would provide much-needed clarity on whether the integration of voice channels enhances influence or introduces interpretive ambiguity, particularly across varying organisational cultures, leadership styles and issue types.

In addition to examining how employees use multiple communication channels, future research should also investigate how the structural features of digital platforms reshape the social dynamics of voice expression. Digital affordances, such as anonymity, association, visibility and persistence, may influence the network sizes and diversity and the roles individuals adopt in the voice process and give rise to new forms of participation (Kim et al.,

2025), such as digital endorsers (e-endorsers) (Sæbø et al., 2020). Exploring these dynamics would deepen theoretical understandings of how voice is socially structured in digitally mediated environments and provide practical guidance for developing inclusive and responsive organisational communication systems (Riemer et al., 2015; Vaast & Kaganer, 2013).

Relatedly, future studies could examine how individual differences, such as digital fluency, voice orientation and communication apprehension, and contextual factors, such as psychological safety, leadership receptivity and platform design, influence employees' channel preferences and patterns of multimodal voice behaviour (Kim et al., 2025).

Investigating these factors would enrich our understanding of how employees navigate increasingly complex communication ecosystems and inform organisational practices aimed at supporting voice across diverse platforms (Vaast & Kaganer, 2013). Such insights could guide the development of communication infrastructures, leadership strategies and cultural norms that foster coherence, inclusivity and responsiveness in hybrid work environments.

Collectively, these research avenues hold significant promise for advancing theory on voice and for designing systems that better support inclusive and effective voice environments in both traditional and digital workplaces.

6 Concluding remarks

This thesis has explored how voice unfolds across social, group, organisational and digital contexts to deepen our understanding of voice as a process shaped by its environment. The three studies have shown that voice is not just an individual act, but a behaviour shaped by social relationships, team dynamics and organisational structures, especially within today's increasingly digital and hybrid workplaces. The findings suggest that effective voice depends on environments that support psychological safety, encourage accountability and

build confidence. Digital platforms can play a key role by offering anonymity and visibility, which can empower employees to speak up. While a single act of voice may seem minor, its collective impact becomes significant when supported by inclusive systems, group support and open communication channels. Together, these studies offer a more integrated and context-sensitive understanding of voice. They highlight the importance of recognising the roles of different actors, the conditions that enable voice, and the pathways through which voice influences organisational outcomes. As the world of work evolves, this thesis provides timely insights that can help organisations better listen to, support and act on employee voice.

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