

Are you an ethical leader? An analysis of CEOs' letters in AI-driven ethical companies

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Abstract

This paper explores linguistic signals exhibited by CEOs of ethical companies that use AI and proposes an ethical communication framework for leaders. Moving beyond traditional surveys, we employ computational linguistics to analyse over 500 CEOs' letters to shareholders from ethical companies, advancing leadership measurement with technology-assisted tools. Our findings reveal a unique set of lexical signals that distinguish ethical leaders' communication patterns from the general public and (non)hubristic leaders. Additionally, we identify four macro topics in ethical leaders' communication: resilience, sustainability, collaboration and cooperation, and adaptability. This research contributes to the discourse on ethical leadership in the age of AI, offering both theoretical insights and practical guidance for navigating the complex interplay of leadership communication, ethics, and technology in organisational settings. Our study suggests that ethical leadership is imperative in the realms of both Environmental, Social, and Governance (ESG) considerations and the ethical use of Artificial Intelligence (AI).

Word count (including abstract, excluding tables and references): 5125

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Introduction

The advent of Artificial intelligence (AI) and Machine-learning (ML) technologies has significantly impacted individuals, organisations, and society by contributing to faster processes, fairer decisions and invigorating the economy (Pasquale, 2015; Brynjolfsson, Rock and Syverson, 2017; Bansak *et al.*, 2018). Notably, AI technologies span across customer services, cybersecurity, fraud management, customer relationship management and digital personal assistants (Haan, 2023). For example, Google enables automated machines to sense their surroundings and make decisions based on the provided data (Heukamp, 2020), Hilton uses AI-enabled technologies to screen the initial job applicants (van Esch and Black, 2019). Despite these advancements, the “black box” nature of AI systems raises substantial ethical, societal and good governance concerns (Munoz, Smith and Patil, 2016; Curtis, Gillespie and Lockey, 2023; Sullivan and Fosso Wamba, 2022). AI systems can yield divergent outcomes due to biased input data, flawed algorithms, or irresponsible implementation (Starke *et al.*, 2022). Scaling up of AI technologies without proper verification can threaten societal values and constitutional rights, including autonomy, privacy, and democracy, leading to potential power imbalances (Curtis, Gillespie and Lockey, 2023).

In response to these challenges, solutions have primarily focused on strengthening regulation, raising public awareness, and educating leaders and employees about AI (Curtis, Gillespie and Lockey, 2023). Scholars have already agreed that future leaders must understand the basics of AI models and be able to manage machine-machine, human-human, and human-machine teams (Glikson and Woolley, 2020; Heukamp, 2020). However, despite the considerable work in these areas, the role of leaders in fostering fair, transparent and ethical practices, and thereby encouraging such behaviour among followers within the AI context, has been somewhat overlooked. Consequently, leaders' communication becomes crucial in this context, because the content and manner in which leaders communicate can influence others as well as reveal their individual characteristics and predict outcomes (Liu, Chambers and Moore, 2023). Furthermore, CEO language offers a rich resource for analysing leaders' cognitions and behaviors, as well as leaders influence on strategic decision-making (Akstinaite, Garrard and Sadler-Smith, 2021). Analysing their languages becomes a valuable and practical mean to understand leaders better, especially when direct access to top-tier business executives is often challenging (Akstinaite, Robinson and Sadler-Smith, 2019).

As such, through computational linguistics analysis of over 500 CEOs' letters to shareholders, we identify distinct linguistic markers and thematic elements of ethical leadership communication in the AI context. Our research contributes to the existing corpus of knowledge on ethical leadership and the use of AI technologies in several significant ways. Firstly, it advances the identification of ethical leaders by analysing the communication of CEOs from the companies that use AI, as such moving beyond traditional questionnaire-based methods towards employing computational linguistics. This approach not only deepens our understanding of ethical leadership in the context of AI but also aligns with contemporary calls for employing technology-assisted tools for more nuanced leadership assessment. Secondly, our research strives to move beyond the conventional focus on regulatory frameworks and awareness initiatives as means to mitigate risks associated with AI systems. Building on the idea that leaders' ethical behaviour is fundamental in shaping organisational culture and stakeholder relations, we introduce an innovative perspective that emphasises the importance of ethical leadership in navigating the complexities of AI implementation. This approach is

crucial as it redirects the conversation towards the proactive role leaders must adopt in upholding ethical standards, thereby addressing the “black box” challenges inherent to AI technologies. We discuss the implications of our findings for leaders and organisations in an AI-driven landscape, highlighting the pivotal role of ethical leadership in ensuring technology’s positive societal impact.

Literature Review

Ethical leadership

Ethical leadership is defined as “the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making” (Brown, Treviño and Harrison, 2005, p. 120). In other words, ethical leadership is about the behaviour that cultivates a strong connection between the concepts of right, fair and proper (Nguyen, Nguyen and Thanh Hoai, 2021).

Many predominantly positive results can be identified from ethical leadership. A review conducted by Ko *et al.* (2018) of over 60 empirical studies published between 2005 and 2015 alone mentioned more than 40 outcomes of ethical leadership such as followers being more confident of their leaders support and as such more likely to report wrongdoings, being more satisfied with work and life in general. Ethical leaders are expected to make fair choices, structure a just and transparent work environment amongst employing other behaviours and values (Lin *et al.*, 2023). They positively influence attitudes, behaviours and the psychological state of employees and encourage moral reasoning and ethical conducts across the organisation (Ahmed Iqbal *et al.*, 2020; Cheffi *et al.*, 2023). Employees who observe such leaders are more likely to trust their leaders’ decisions and believe their leaders have their best interests in mind (Dust *et al.*, 2018). In turn, employees feel more comfortable speaking up (Walumbwa, Morrison and Christensen, 2012), and taking the initiative to produce positive change (Dust *et al.*, 2018). All of which are especially significant in the organisations that use AI and have to deal with the risks such as AI-enabled fake online content, disease misdiagnosis, bias, data privacy breaches (Curtis, Gillespie and Lockey, 2023; Hunkenschroer and Luetge, 2022).

In relation to technological innovation, ethical leadership has been previously identified as pivotal in moderating the impact of technological innovation on firm performance with ethical leaders optimising the use of digital technologies for more effective communication, stronger relationships, and successful strategy development, which in turn enhances trade performance (Lin *et al.*, 2020). Moreover, recent findings indicate that CEO ethical leadership is instrumental in developing firm green IT capabilities, thereby improving firm environmental performance (Hameed *et al.*, 2023).

Despite a recent recognition of ethical leadership’s role in enhancing technological innovation and firm performance, notably in the realms of digital communication, strategy development, and environmental sustainability, there has been a conspicuous gap in research regarding its application and implications within the context of artificial intelligence technologies. Moreover, regarding the assessment of ethical behaviour, the majority of previously mentioned studies relied on traditional approaches such as data collection through surveys, questionnaires, or focus groups to measure ethical leadership, ethical values, and ethical decision-making (Gloor, Fronzetti Colladon and Grippa, 2022). Even using more behavioural measures as communication, prior research has primarily examined employees’ perceptions of their leaders

rather than delving into how leaders actually communicate with their followers (Weiss et al., 2018).

The use of language

Language is a significant component of the leadership process, and CEOs express their leadership through their verbal and written discourse (Akstinaite, Robinson and Sadler-Smith, 2019; Craig and Amernic, 2016). According to the literature, language serves as both a communication system for individuals and a social phenomenon, generating imagery that, in turn, shapes behaviours (Burdett, 1999; Firth, 1950). Based on the theory of natural language use, individuals exhibit distinctive patterns in their language, revealing aspects of their personality, much like their unique stylistic behaviours like how they dress or walk (Pennebaker and Graybeal, 2001). Previous research analysing leaders' communication primarily delved into language as means of recognising dark leadership such as narcissism (Craig and Amernic, 2011; Buyl, Boone and Wade, 2019), hubris (Akstinaite, Robinson and Sadler-Smith, 2019; Craig and Amernic, 2016; Akstinaite, Garrard and Sadler-Smith, 2021). Yet, only recently focus has started shifting towards the analysis of language to indicate ethical leadership (Banks *et al.*, 2023; Akstinaite, Garrard and Sadler-Smith, 2021).

While understanding the language of ethical leaders is important for their identification and further development, language for leaders also serves as a tool to emphasise the significance of ethical behaviour and communicate their values to their followers (Liu, Chambers and Moore, 2023). For that the signalling theory is important. It suggests that signals can reduce asymmetries between two parties when one party, the sender (e.g., a leader), chooses whether and how to signal the information to the other party (e.g., employees, shareholders) (Banks *et al.*, 2023; Lee, Raschke and Krishen, 2022). In the context of ethical leadership, signalling theory proposes that leaders can convey ethical messages to overcome information asymmetry through their behaviours to various stakeholders, including followers, customers, suppliers, and investors (Banks *et al.*, 2021). For instance, CEOs' letters to shareholders can serve as a means to signal ethical leadership, prior studies revealing that the language employed in these letters can be indicative of outcomes such as organisational accountability, performance, and reputation (Im, Kim and Miao, 2021).

Methods

Data collection and analysis

CEOs letters to shareholders and investors from the companies that were recognised as ethical in *The World's Most Ethical Companies Honoree List* by Ethisphere at least once from 2019 to 2023 were collected. Only CEOs letters of ethical companies that use AI were collected given AI potential to surpass any other technological change in human history to date. In total, 541 letters consisting of 369,661 words were analysed. It is important to acknowledge that while these letters are likely to be composed with the assistance of co-authors, such as Public Relations representatives, the content within the letters represents a distinct set of signals sent and endorsed directly by the CEO as the leader (Banks *et al.*, 2023). According to Im, Kim and Miao (2021), CEO letters may be viewed as both personal narratives of the CEOs and narratives of the corporation.

We used two frameworks for the data analysis: Latent Dirichlet Allocation (LDA), which provides qualitative insights, and Linguistic Inquiry and Word Count (LIWC), which offers

quantitative insights. First, we conducted the LDA analysis within an R software environment (R Studio and the R project). In short, the model posits that textual document is composed of topics, which, in turn, is comprised of words from a vocabulary. Its objective is the automated identification of latent topics (Blei, 2012; Reisenbichler and Reutterer, 2018). Using the *ldatuning* package and methodologies by Cao *et al.* (2009), Arun *et al.* (2010), and Deveaud, Sanjuan and Bellot (2014) we determined the optimal number of topics, identifying it as 8 through a visual representation of curves generated by those methodologies. Following that, we used LIWC, a computation linguistics technique that uses frequency counts of text samples. It enables mathematical comparison of scores across theoretical dimensions, such as the use of adjectives and verbs (Boyd *et al.*, 2022). The LIWC-22 Dictionary covers 12,000 words on average, and captures between 80% and 90% of all words people use. More details: <http://www.liwc.net>. Both methods are highly suitable for analysing extensive textual data, as is the focus of this research.

Results

Part 1. LDA analysis

From the LDA analysis, eight primary topics emerged, which we subsequently systematised and categorised into four overarching themes – macro topics: resilience, sustainability, collaboration and cooperation, and adaptability (see Table 1).

Table 1. Macro Topics (LDA analysis)

Macro topic (theme)	Meso topic	LDA output and frequency	Most probable words	Examples
Resilience	Global Growth and Societal Impact	Topic 4 (73,5%)	Growth, customers, company, world, people, global, continue, million, vaccination, deepened.	“It is the decency of our people that allows us to recognize how critical diversity and inclusion are to a successful, long-term strategy.” “These crises have only deepened Henry Schein’s resolve to play our part in addressing the gaps in access to quality health care and continuously building a more just society.”
Sustainability	Social and Environmental Responsibility	Topic 7 (15,9%)	Climate, investing, income, organizations, consumers, objective, completing, receive, edge, cards.	“Over the past year, we’ve set ambitious climate goals and outlined detailed plans to achieve them, including to be carbon negative, zero waste, and water positive by 2030.” “And it supports organizations that are applying AI to environmental challenges, by helping them harness the full power of cloud computing.”
		Topic 2 (1,9%)	Percentage, mindset, decarbonization, sizes, nonprofits, penetration, details, console, founded, perseverance.	“Our purpose is our north star as we pursue a bold decarbonization strategy that is grounded in the principles of reliability and affordability.” “We donated more than \$1.4 billion in software and services in fiscal 2018, via Microsoft Philanthropies, helping nonprofits get access to the technology they need to drive greater impact, and in calendar year 2017 our employees donated a record \$158 million (including company match) through our employee giving program to support nonprofits in local communities.”
		Topic 3 (1,6%)	Recycled, loans, considerable, low, overcome, bridging, currencies, listed, year, business.	“Recent examples of our efforts in relation to this responsibility include our climate change initiatives, our use of recycled plastics, and development of packaging that is conducive to recycling.”

“Our purpose is to empower all to make the most of our energy and resources, bridging progress and sustainability for all.”

Collaboration and cooperation	Global Engagement and Strategic Initiatives	Topic 1 (1,9%)	<i>Nations, lifestyle, remotely, pursued, stake, eastern, thriving, elements, promoted, called.</i>	<i>"We pursued strategic business collaborations, spun out a new venture company, and set a record for staff contributions to scientific stature."</i>
		Topic 8 (1,7%)	<i>Divestitures, cloudbased, procedures, benchmark, nations, lifestyle, remotely, pursued, stake, eastern.</i>	<i>"Over the past decade, we have invested more than \$1.2 billion in Newark to help build thriving neighborhoods across the city and bring financial opportunity to more of its residents."</i>
Adaptability	Strategic Vision and Performance Goals	Topic 6 (1,9%)	<i>Explore, preferences, comprising, euros, leakage, strong, performance, health, increased, part.</i>	<i>"To aid this continuing effort, we've assembled a team that is 100% focused on our integrations and divestitures."</i>
		Topic 5 (1,6%)	<i>Ambitions, outperforming, learned, roadmap, visual, movement, converted, clouds, connections, surgical.</i>	<i>"We supported efforts to advance education and bolster economic stability in developing nations."</i>
				<i>While renewables are playing a leading role in our growth story, we continue to explore and invest in other attractive markets that present equally compelling value-creation opportunities for the company.</i>
				<i>"We had all the right elements to succeed: dedicated leaders, a capable team, a strong culture, loyal customers, diverse businesses, and a solid financial foundation."</i>
				<i>"...the desire to achieve ambitions sits at the heart of our culture at JLL, driven by our shared values of teamwork, ethics and excellence."</i>
				<i>"Solving pressing global-scale social issues will unmistakably become a major movement in the coming decades, and this is the central core that runs through our policies."</i>

Source: Created by authors

We found that the predominant theme in CEOs' letters to shareholders revolves around resilience as a means to continuously foster global growth and societal impact, constituting 73,5% of the CEOs' discourse. Key terms such as "growth", "customers", and "people" reflect a collective commitment to navigating challenges and advancing global initiatives while prioritising people. For instance, one CEO stated that "It is the decency of our people that allows us to recognise how critical diversity and inclusion are to a successful, long-term strategy". The emphasis on "vaccination" highlights a commitment to public health, a particularly relevant focus given that the years for analysis of CEOs' letters are centred around the COVID-19 pandemic. One CEO said "Protection of our working environment from COVID-19 will remain a priority throughout 2021, and we are making a concerted effort to work with our colleagues and stakeholders to encourage and accelerate vaccinations".

The letters of CEOs also revealed that they pay particular attention to sustainability. Approximately one-fifth of the content (19,4%) in their letters is devoted to social and environmental responsibility. Phrases such as "climate positive" and "sustainability strategy" demonstrate leaders' commitment to environmentally sustainable practices. They focus on ambitious climate goals such as "decarbonization," "zero waste," and "water positivity," while also highlighting their actions to promote environmental responsibility. For example, one CEO in its letter to shareholders stated that "We have ambitious materials targets, including that all our materials are to be recycled or otherwise sustainably sourced by 2030". This also includes supporting organisations applying AI to address environmental challenges and advocating for the use of recycled plastics.

CEOs emphasise collaboration and cooperation as a means to pursue strategic ventures and contribute to global development and stability. Prioritising organisational success over personal ego constitutes a crucial aspect of ethical leadership, demonstrating an awareness of one's role within the broad network of stakeholders (Alshammari, N. Almutairi and Fahad Thuwaini, 2015). For example, one CEO stated, "We pursued strategic business collaborations, spun out a new venture company, and set a record for staff contributions to scientific stature". Another one said that "Our work in 80 nations and territories bridges markets and cultures to put the customer at the center of business".

Finally, adaptability refers to a leader's capacity to communicate a strategic vision and performance goals to the primary stakeholders, fostering ongoing improvement. In this context, CEOs make statements emphasising "performance", "growth", and "innovation" while also indicating a commitment to continually evolve to meet customers' preferences and societal needs. For instance, one CEO stated "While renewables are playing a leading role in our growth story, we continue to explore and invest in other attractive markets that present equally compelling value-creation opportunities for the company".

Part 2. LIWC analysis

We also analysed all letters using LIWC-22 software, which offers textual analysis and helps to create a map linking crucial psychosocial constructs and theories to words, phrases, and other linguistic constructions (Boyd *et al.*, 2022). Most of the LIWC output consists of percentages of total words within a text, while the remaining are mainly summary measures, such as *clout* and *positive tone*. These measures are calculated as percentiles, ranging from 1 to 99. Subsequently, we compared these results to the scores for the same categories by the general public (scores indicated in Boyd *et al.* (2022)) and both hubristic and non-hubristic

leaders (as indicated in Akstinaite, Robinson and Sadler-Smith (2019)). Scores for the non-hubristic and hubristic leaders had to be recalculated using the latest updates of LIWC.

The LIWC analysis revealed a significant distinction in the “clout” variable, where ethical CEOs scored remarkably high: 96,69 in comparison to 72,85 for non-hubristic leaders and 52,38 for hubristic leaders. This high score suggests that speeches delivered by ethical CEOs could be considered noteworthy instances of leadership communication. It indicates that ethical leaders (EL), when compared to the general public (GP) and (non)hubristic leaders ((N)HL), may possess a greater ability to influence and inspire others, delivering their messages with a profound impact (see Table 2). This could also be seen from other measures such as the use of words related to *drives*, *affiliation* and *achieve* – all them being more frequently used by ethical leaders than non-hubristic and hubristic leaders as well as the general public. In addition, CEOs of ethical companies consistently maintain a positive tone in their letters: 81,33 compared to 63,88 for general public and 58,44 for hubristic leaders. This aligns with the concept that ethical leaders often aim to inspire and motivate others, employing uplifting language to encourage ethical actions and choices (Liu, Chambers and Moore, 2023). The latter statement could also be supported by the finding that ethical CEOs more frequently use prosocial words that signal helping or carrying about others. This is also complemented by their use of words related to reward such as opportunities, benefits. For example, one CEO stated that “we continued to invest in wages, training and many new employee benefits, including paid time off for part-time employees, paid caregiver leave, expanded mental health benefits, enhanced adoption assistance and a new surrogacy-assistance benefit”.

Overall, content word categories distinctly indicate the areas individuals are directing their attention to (Tausczik and Pennebaker, 2009). In our analysis, we observed that ethical CEOs, in their communication, use more words related to work and money such as business, working as well as to tech than both the general public and (non)hubristic CEOs. The most significant disparity in word usage between ethical leaders and both the general public and (non)hubristic leaders was observed in words related to illness and wellness, with ethical leaders employing them about seven times more frequently. However, it is crucial to note that this analysis spans the period of the COVID-19 pandemic.

Table 2. Semantic Dimensions (LIWC analysis)

Category	EL	GP	NHL	HL
<i>Use of words related to drives</i> (we, our, us)	13,69	2,96	7,37	6,13
<i>Use of words related to affiliation</i> (we, us, help)	7,98	1,53	4,27	3,25
<i>Use of words related to achieve</i> (better, best, working)	3,99	0,97	1,89	1,74
<i>Use of words related to power</i> (own, order, allow)	2,18	0,50	1,46	1,28
<i>Use of prosocial words</i> (signaling helping or carrying about others)	1,38	0,40	0,62	0,50
<i>Use of words related to tech</i> (comput*, email*)	1,18	0,29	0,65	0,84
<i>Use of words related to work</i> (work, working)	9,93	2,85	3,40	2,86
<i>Use of words related to money</i> (business*, market*)	3,99	0,40	2,01	1,90

<i>Use of words related to reward (opportun*, benefi*)</i>	0,85	0,05	0,37	0,38
<i>Use of words related to risk (secur*, protect*)</i>	0,43	0,10	0,17	0,26
<i>Use of words related to curiosity (scien*, look*, research*)</i>	0,63	0,44	0,55	0,34

Source: Created by authors

The analysis of **linguistic dimension** revealed a notably high “we” to “I” ratio. Ethical leaders use personal pronoun “we” approximately 20 times more often than “I”, and this ratio is 70 times higher when compared to general public, and 30 times higher when compared to hubristic leaders. In addition, CEOs of ethical companies more often use prepositions and adjectives in their language than the general public and (non) hubristic leaders.

The categories encompassing the use of verbs, auxiliary verbs, and adverbs emerged as a weaker aspect, indicating that ethical leaders employ these linguistic elements less frequently compared to both the general public and (non)hubristic leaders (see Table 3). This finding aligns logically with the nature of ethical leaders’ language, which tends to be highly analytical. In the LIWC-22 analysis, ethical leaders scored 87,96 on the “analytical” variable, in comparison, non-hubristic leaders scored 31,15, hubristic leaders 27,02 and general public 11,03.

Table 3. Linguistic Dimensions (LIWC analysis)

Category	EL	GP	NHL	HL
<i>Use of personal pronouns</i> (“we” to “I” ratio)	20,42	0,28	1,47	0,67
<i>Use of prepositions (to, of, in, for)</i>	15,96	11,91	13,10	12,84
<i>Use of adjectives (more, very, often, new)</i>	7,29	6,71	6,04	5,91
<i>Use of auxiliary verbs (is, was, be, have)</i>	4,04	13,14	11,18	11,79
<i>Use of verbs (is, was, be, have)</i>	8,22	22,48	19,44	20,62
<i>Use of adverbs (so, just, about, there)</i>	2,33	8,97	6,32	6,08

Source: Created by authors

Discussion

Communication serves as the medium for leaders to articulate their values, vision and character, subsequently shaping stakeholders’ beliefs, motivations, actions, behaviour, and performance, with overarching consequences for organisations and societies (Liu, Chambers and Moore, 2023). Therefore, by verbally expressing their virtues and ethical standpoint, leaders communicate to the environment their ethical leadership.

Given the foundation laid by Brown, Treviño and Harrison (2005), a predominant focus in ethical leadership research has centred on the use of questionnaires as a primary tool for assessing ethical leadership. For example, a thorough review of ethical leadership literature conducted by Ko *et al.* (2018) revealed that out of 64 publications, 62 used Brown and colleagues’ ethical leadership scale to measure ethical leadership. However, “one cannot train

leaders to be more ethical based on having followers complete questionnaires” (Banks et al., 2023, p. 2). As a departure from traditional survey-based methods in ethical leadership research, we analysed the language of CEOs from ethical companies as a means to identify such leaders and foster ethical leadership communication. Asserting a forward-looking perspective, we exclusively examined the discourse of CEOs from companies that use AI. This decision was based on acknowledging that the increasing implementation and use of AI systems requires more ethical leaders to address associated risks effectively. Finally, we employed computational linguistics for the analysis, aligning with the recommendation of Fischer (2023) to leverage technology-assisted tools for improved leadership measurement.

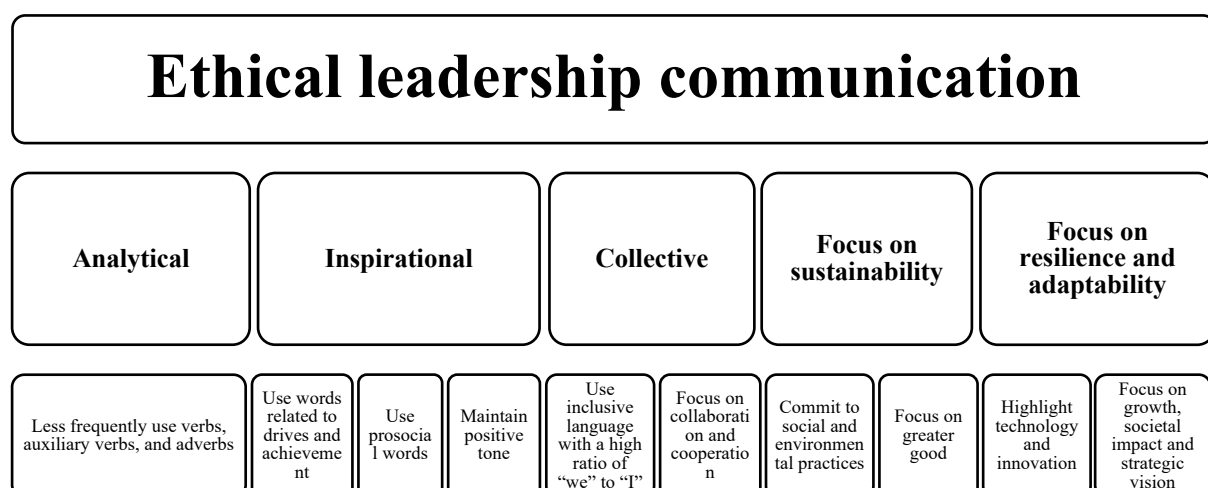
In our work, we introduced ethical communication framework which suggests that understanding both the manner in which leaders communicate and the subjects they address in their language can assist in identifying ethical leaders and offer guidance to those aspiring to embody ethical leadership principles. Our study demonstrated that ethical leaders’ communication revolves around four main topics – resilience, sustainability, collaboration, and cooperation, and adaptability. Additionally, we found that ethical leaders exhibit a unique set of lexical signals, showcasing distinctive communication patterns compared to the general public and (non)hubristic leaders.

Theoretical implications

Our work sought to advance measures of ethical leadership. This research extends the work conducted by Banks et al. (2023), which involved the collection of CEOs’ letters to shareholders and coding them based on existing literature and definition of ethical leadership provided by Brown, Treviño and Harrison (2005). Firstly, we base our findings on a more extensive dataset, encompassing three times more CEOs’ letters to shareholders. Secondly, our analysis is specifically focused on the language used by CEOs of ethical companies that also use AI. Finally, while confirming certain prior findings (e.g., ethical leaders employing expressions related to reward and recognition), our research introduces a new dimension to the analysis of ethical leader signals by providing insights into how ethical leaders communicate. Notably, to the best of our knowledge, no such research has been previously undertaken.

Most importantly, our study proposes ethical leadership communication framework, highlighting the distinct patterns that set ethical leaders apart (see Figure 1).

Figure 1. Ethical leadership communication framework



Central to this framework is the observation that ethical leaders embrace collective language evident through high “we” to “I” ratio. Our analysis suggests that leaders in ethical companies consistently favour “we” over “I” in their communication, setting them apart not only from the general public but also from hubristic and non-hubristic leaders. While, prior studies have identified personal pronouns, particularly the use of “we”, as significant indicators of hubris (Akstinaite, Robinson and Sadler-Smith, 2019; Garrard *et al.*, 2014; Kacewicz *et al.*, 2014), our research introduces the idea that in order to determine whether the use of “we” indicates hubris or ethical leadership, it is equally crucial to consider the ratio of “we” to “I”. This finding is noteworthy, as being an ethical leader goes beyond simply refraining from unethical behaviour (Den Hartog, 2015). In addition, these findings help to advance the understanding of ethical leaders’ value to organisations. For example, Owens and Heckman’s (2012) study, which involved the analysis of 55 in-depth interviews, found that leaders employing collective-focused language, such as “we” instead of “I”, tend to focus on followers’ strengths and contributions to the organization (Liu, Chambers and Moore, 2023). Another research showed a positive correlation between the use of we-referencing language by CEOs and improved financial performance indicators (Fladerer *et al.*, 2020). These findings have the potential to establish a groundwork for the notion that ethical leaders play a role in improving financial outcomes. This idea gains further support from our discovery that ethical leaders more frequently employ words associated with work and money compared to both the general public and (non)hubristic leaders.

Ethical leaders use highly analytical communication style distinguishing them from both the general public and (non)hubristic leaders. For example, ethical leaders use of verbs, auxiliary verbs, and adverbs less frequently. Previous research indicates that texts with lower scores in analytic thinking exhibit higher base rates of pronouns, adverbs, and auxiliary verbs, and are associated with more immediate, narrative thinking (Boyd, Blackburn and Pennebaker, 2020).

Ethical leaders’ communication is set to influence and inspire others. Words related to drives, affiliation, and achievement are more frequently employed by ethical leaders compared to both non-hubristic and hubristic leaders, as well as the general public. For example, one CEO stated that “[...] we all want to live in a world where we all do our best to help each other succeed”. Additionally, the CEOs of ethical companies consistently maintain a positive tone in their letters and use prosocial words, signalling a commitment to helping and caring about others. One CEO said “[...] we have put forward a new strategic approach to help carry us through the pandemic and best address the evolving challenges faced by our clients and a warming planet”.

Ethical leaders champion sustainability. The emphasis on sustainability and commitments to social and environmental improvements serves as a crucial metric for ethical leadership. While ethical leadership has been seen associated with broader values, such as caring about the impact of actions on society, such considerations have been relatively rare in the literature (Den Hartog, 2015). It is only more recently that scholars have started emphasising the importance of ethical leaders communicating a sense of social responsibility and a commitment to the greater good (Tourigny *et al.*, 2017; Treviño, Brown and Hartman, 2016). For example, one CEO stated “We are also committed to maximizing the benefits of clean energy by empowering other companies to meet their sustainability goals”. Overall, in the CEOs letters to shareholders a word “sustainability” was used at least 400 times, a word “environment” at least 280, and a word “climate” at least 180 times.

Ethical leaders demonstrate resilience and adaptability through their language. For example, one CEO stated that “we focused in 2021 on being flexible, resilient and responsible. We

emphasised keeping our people healthy and safe while operating our business effectively for the greater good of our customers, communities and shareholders.” It could also be seen from the adaption of innovations and technologies. For example, a word “technology” was used at least 700 times, and a word “innovation” – at least 450 times in the letters of shareholders. CEOs of ethical companies using AI used words related to technology more frequently than general public and (non)hubristic CEOs. For example, one CEO stated that “Looking forward, we already see the dawn of a new era, multipolar and fragmented, augmented by Tech and Artificial Intelligence, with the highest expectations in terms of sustainability, purpose and cultural diversity”.

Practical Contributions

Ethical leadership matters for organisations, and the need for it has never been greater taken into the account recent decades of business scandals escalated by unethical leaders such as Elizabeth Holmes, Adam Neumann (Den Hartog, 2015; Zyglidopoulos, 2020). Our study shows that ethical leadership is imperative in the realms of both Environmental, Social, and Governance (ESG) considerations and the ethical use of Artificial Intelligence (AI). Our research not only provides valuable insights into recognising ethical leaders but also contributes to the development of tools and training programs aimed at nurturing ethical behaviour among leaders. Ethical leaders, expected to make fair choices and establish transparent environments, play a crucial role in shaping organisational culture. The linguistic markers identified in our study offer a roadmap for ethical leadership development, emphasising the significance of communication skills and a consistent commitment to sustainability. It is especially important since recent research shows that companies deemed ethical, led by ethical leaders, are also more likely to report ESG policies, and thus be sustainable and have sustainable finance (Krambia-Kapardis, Stylianou and Savva, 2023).

Additionally, the study highlights the role of ethical leaders as contributors to the brand value, particularly in the context of ESG commitments. Ethical leaders express their commitment to social and environmental responsibility through their language, as such effectively signalling sustainability efforts to both consumers and other stakeholders. Past studies have demonstrated that a company’s ESG signalling directly impacts brand valuation, with linguistic style serving as a potent mechanism for establishing a connection with the target audience (Lee, Raschke and Krishen, 2022).

Furthermore, our study has implications for human resources (HR). Companies are keen to understand the processes of selecting, developing, and retaining ethical leaders (Brown and Treviño, 2006). Notably, research has shown that in the contexts where ethical leadership is high, commitment-based HR practices contribute to reduced employees’ intentions to resist future change and increase their commitment (Neves, Almeida and Velez, 2018).

Finally, it is also important to note, that the method we have used is both scalable and lends itself to automation for the analysis of other forms of CEO utterances, including “tweets”, emails, media commentaries, blogs. It broadens the research on ethical leadership by determining ethical leadership signals (i.e., linguistic markers) specific to leaders who manage companies that use AI. Furthermore, our findings will contribute to distinguishing evaluations from behaviours. This distinction is crucial for advancing our understanding of ethical leadership, as different followers may witness the same behaviour but interpret it differently (Banks *et al.*, 2023).

Limitations and Future Research

It is sometimes argued that computer-aided word count tools are limited in their focus on word frequencies without considering their context (Boyd and Schwartz, 2021). For example, positive words like “care” might be inaccurately categorised if used in negative contexts such as “The preferential treatment of certain teams showcased a biased care approach”, introducing noise into the measure. However, in this context, it is important to note that the companies selected for this study were already established as ethical.

Focusing on linguistic signals as a proxy for ethical leadership may not capture the entirety of leaders’ behaviours, and there is a possibility that leaders of ethical companies use ethical language to mask their true intents. Looking ahead, future research could explore changes in CEO language use over time and to various leader types, employing our method to examine linguistic shifts longitudinally.

Conclusion

Our study enriches the ongoing discourse on ethical leadership in the AI age, offering theoretical insights, practical guidance, and avenues for future exploration. Departing from conventional survey-based approaches, we used computational linguistics to analyse the language of CEOs from ethical companies that use AI. This method revealed how ethical leaders’ communication distinguishes from the communication of general public, hubristic and non-hubristic leaders. In addition, it allowed to understand the main topics of ethical leadership communication which we both incorporated into ethical communication framework.

The theoretical implications of our work extended beyond existing research, using extensive textual dataset and focusing specifically on the language of CEOs in ethical companies that use AI. Notably, our findings introduced the importance of a “we” to “I” ratio in recognising ethical leaders’ language, a distinctive measure that sets ethical leaders apart from both hubristic and non-hubristic leaders. In addition, we found that ethical leaders not only use collective language, but also tend to emphasise the importance of sustainability in their communication. Finally, ethical leaders use words to drive impact, inspire, and demonstrate the resilience and adaptability.

Practically, our study underscores the critical role of ethical leadership in ESG considerations and the ethical use of AI. The identified linguistic markers offer a practical roadmap for recognizing and nurturing ethical leadership. Furthermore, the study unveils broader implications for brand value and HR practices.

Finally, our approach is applicable to various forms of CEO communication, and opens avenues for future research. It broadens the scope of ethical leadership analysis, contributing to the distinction between evaluations and behaviours. The intersection of linguistic analysis, ethical leadership, and AI sets the stage for continued investigation into the causes and consequences of ethical leadership behaviour within technologically advanced organisational settings.

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