





Annamária Fábíán/Igor Trost (eds.)

# **Impulses and Approaches to Computer-Mediated Communication**

**Proceedings of the  
12<sup>th</sup> International Conference on  
Computer Mediated Communication and  
Social Media Corpora for the Humanities**

**CMC 2025**

**4<sup>th</sup>-5<sup>th</sup> September 2025**

**University of Bayreuth, Germany**

Impulses and Approaches to Computer-Mediated Communication. Proceedings of the 12th International Conference on Computer Mediated Communication and Social Media Corpora for the Humanities, CMC 2025, 4th-5th September 2025, University of Bayreuth, Germany.

Editors: Annamária Fábián, Igor Trost

Published by University of Bayreuth

Conference website: <https://www.cmc2025.uni-bayreuth.de/en/index.html>

DOI: (will follow)

ISBN: (will follow)

This work is licensed under a Creative Commons “Attribution 4.0 International” license.

# Table of Contents

<b>I. Preface and New Impulses and Approaches to Computer-Mediated Communication</b>	9
<b>II. Committees</b>	13
<b>III. Keynotes</b>	15
(1) <b>Studying Discourse in Social Media: Challenges &amp; Opportunities</b> Stephanie Evert	17
(2) <b>Studying language and identity in a corpus of computer-mediated communication with (and without) sociodemographic metadata</b> Gavin Brookes	22
<b>IV. Talks</b>	27
(3) <b>Towards a new Curation Workflow for the CMC Corpora Resource Family</b> Egon W. Stemle, Lionel Nicolas (Eurac Research, Italy), Alexander König (CLARIN-ERIC, The Netherlands)	29
(4) <b>HopeEmo: A Bilingual Social Media Corpus for Emotion and Hope Speech Analysis</b> Wajdi Zaghouani (Northwestern University, Qatar), Md. Rafiul Biswas (Hamad Bin Khalifa University, Qatar)	33
(5) <b>Tracking Ephemerality in YouTube Comments: Towards Methods for Building Dynamic CMC Corpora</b> Yining Wang, Katrin Weller (Leibniz Institute for the Social Sciences, Germany)	36
(6) <b>Deepfakes in Criminal Investigations: Interdisciplinary Research Directions for CMC Research</b> Lorenz Meinen, Astrid Schomäcker, Timo Speith, Lena Kästner, Christian Rückert (University of Bayreuth, Germany), Niklas Kühl, Stefanie Wiedemann (University of Bayreuth /FIM Forschungsinstitut, Germany), Markus Hartmann (ZAC NRW, Germany)	40
(7) <b>CRIME: The Corpus of Recorded Investigative, Media, and Evidence-based Proceedings</b> Steven Coats (University of Oulu, Finland), Dana Roemling (University of Birmingham, UK)	45
(8) <b>Dimensions of Drivel in German Telegram Posts: Manual Annotation and Predictive Power</b> Andreas Blombach, Evert, Stephanie, Linda Havenstein, Philipp Heinrich (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)	50

- (9) **A Case Study on Annotating and Analysing Situation Entity Types in Reddit Discussions on Democracy** 55  
Hanna Schmück, Annemarie Friedrich (University of Augsburg, Germany), Michael Reder (Munich School of Philosophy, Germany), Katrin Paula (Technical University Munich, Germany)
- (10) **Annotating and Extracting Suggestive Language in CMC: A Linguistically Grounded Corpus and NLP Approach** 60  
Omnia Zayed, Sampritha Manjunath, Paul Buitelaar (University of Galway, Ireland)
- (11) **Beyond names: how to label gender automatically in CMC data?** 66  
Pasi Fränti, Juhani Järviö, Mehrdad Salimi, Irene Taipale, Mikko Laitinen, Rahel Albicker, Chunyuan Nie, Masoud Fatemi, Paula Rautionaho (University of Eastern Finland, Finland)
- (12) **"I expected better from you, Mr. King": Feminist resistance and reader critique in the subreddit r/MenWritingWomen** 72  
Marie Flesch (Université de Lorraine), Heather Burnett (Université Paris Cité, France)
- (13) **OMG! Why discourse markers thrive in interactive social media writing** 78  
Reinhild Vandekerckhove (University of Antwerp, Belgium)
- (14) **Emoji and Emoticon Use in Online Dating Profiles and Chats: A Corpus Study into Functions and Categories** 82  
Lieke Verheijen (Radboud University, The Netherlands), Tess van der Zanden (Utrecht University, The Netherlands)
- (15) **"Tinder is overrated": Neoliberal Affective Economies in an Italian Incel Forum.** 88  
Selenia Anastasi (University of Rome La Sapienza, Italy), Maria Natasha Fragalà (University of Catania, Italy)
- (16) **Modelling the Interaction Space of Twitch: A Multimodal Framework for Corpus Structuring and Analysis** 94  
Ariane Julie Robert (Università degli studi di Salerno, Italy)
- (17) **Strategic Transparency or Deliberate Ambiguity? A Multimodal Analysis of Airline CSR Communication on LinkedIn** 99  
Fabiola Notari (University of Modena and Reggio Emilia, Italy)
- (18) **Emerging digital discourse traditions: A contrastive analysis of ther/todayilearned subreddit and its German and French counterparts** 104  
Dominique Dias (Sorbonne Université, France)
- (19) **Evaluating Different Methods for Building Specialized Corpora: A Case Study on the German Discourse on AI** 109  
Bruno Brocai, Janine Dengler (University of Heidelberg, Germany)
- (20) **The most common features of the Albanian language used in computer-mediated communication – an overview based on corpus data** 115  
Besim Kabashi (Eberhard Karls Universität Tübingen, Germany)

<b>V. Poster Abstracts</b>	119
(21) <b>Augmenting the CoWoYTP1Att Corpus with Emotion and Hate Speech Annotations: A Study on the Relationship with Appraisal Theory</b> Valentina Tretti-Beckles, Adrian Vergara-Heidke (Potsdam University, Germany)	121
(22) <b>Methodology for Developing a Fact-Checked News Dataset in Norwegian Bokmål for Fake News Detection (The Fakespeak-NOR Corpus)</b> Aleena Thomas, Silje Susanne Alvestad (SINTEF AS, Norway)	122
(23) <b>Building and querying Wikipedia discussion corpora using KorAP</b> Eliza Margaretha, Harald Lungen, Nils Diewald, Marc Kupietz, Rameela Yaddehige (Leibniz Institute for the German Language, Germany)	123
(24) <b>“Prompt as Culture”: A Cross-linguistic Analysis of Prompt Engineering Discourse on Chinese and English Social Media</b> Xiaomin Zhang (University of Modena and Reggio Emilia, Italy)	125
(25) <b>The Biased Language Taxonomy</b> Costanza Marini, Elisabetta Jezek (University of Pavia, Italy)	126
(26) <b>Diversifying Meaning in a Viral Age: The Case of 'Demure' on Social Media</b> Haruka Nishiyama (Keio University, Japan)	127
(27) <b>Discursive Polarisation and the (Non-)Binary Spectrum: Social Media Debate on Gender Diversity</b> Andressa Costa (Karlsruhe Institute of Technology, Germany)	128
(28) <b>Gender differences in Chinese sensory adjectives: A corpus-based study of food videos on Bilibili</b> Mingyu Liu (The Hong Kong Polytechnic University, Hong Kong)	129
(29) <b>Emotional Expression in Text-Based Communication: An Analysis of Online Mentoring for Girls in STEM</b> Claudia Uebler, Albert Ziegler, Heidrun Stoeger (University of Regensburg, Germany)	130
(30) <b>Comparative Analysis of Comments on Feminism on Hupu and Xiaohongshu: A Text Mining Approach</b> Mingyu Liu (The Hong Kong Polytechnic University, Hong Kong)	131
(31) <b>Metapragmatic Perspectives on Autistic Digital Communication: A Corpus-Assisted Analysis of Self-Reported Practices</b> Nelya Koteyko (Queen Mary University of London, UK)	133

(32)	<b>(A)I Can Empathize with You: Analyses of Empathic Language Used by Chatbots in Psychotherapeutic Settings</b> Florina Züllli (University of Zurich, Switzerland)	1341
(33)	<b>The Positive Pulse: The Hidden Language of Scientific Social Media</b> Cansu Akan, Sasha Genevieve Coelho (Chemnitz University of Technology, Germany)	135
(34)	<b>Science Communication in Science Slams</b> Johanna Vogel (Leibniz Institute for the German Language, Germany)	136
(35)	<b>A Corpus-Based Appraisal Analysis of English-Language Social Media Discourse on Chinese and Italian Operas</b> Lei Liang (University of Modena and Reggio Emilia, Italy)	137
(36)	<b>Decoding Business German: A Corpus-Based Lexical and Morphological Analysis of Contemporary Job Advertisements</b> Kristina Krcmarevic Bogdanovic, Kristina Ilic (University of Belgrade, Serbia)	138
<b>VI.</b>	<b>Training Session with Stephanie Evert</b>	141
(37)	<b>Reading concordances with algorithms</b> Nathan Dykes, Stephanie Evert, Michaela Mahlberg, Alexander Piperski (Friedrich-Alexander-Universität Erlangen-Nürnberg)	143

# **I. Preface**

## **and New Impulses and Approaches to Computer-Mediated Communication**

Following the excellent exchange at prior editions of the CMC-conference series, we are delighted to present the proceedings of the 12th edition of the *International Conference on Computer-Mediated Communication and Social Media Corpora* (CMC2025). The conference mainly focuses on data collection, annotation, and corpus analysis from computer-mediated communication and social media. The conference also provides a framework for scientific exchange on methods of data processing and sustainable data infrastructures.

The CMC 2025 would like to serve the CMC-community to investigate a wide range of language-centered studies in Computer-Mediated Communication and social media, drawing from linguistics, philology, communication sciences and data science, with research questions stemming from corpus and computational linguistics, computational science, language technology, text technology, and machine learning. This year CMC-edition also enables exchange between the aforementioned disciplines on the one hand and data sciences as well as social sciences in general on the other. In addition, keeping up with social and language change, this conference also highlights communication-related questions of social and linguistic-related diversity, participation, and inclusion. The 12th Conference on CMC and Social Media Corpora is held at the Chair of German Linguistics at the University of Bayreuth (Germany) on September 4th and 5th 2025.

This volume includes two keynote papers, 18 accepted talk papers, and the abstracts of the 16 posters presented at CMC 2025 in Bayreuth. Each contribution underwent an anonymous double peer-review process by scientists at the CMC-scientific committee. The contributions will be presented in two sessions (including poster presentations) and in plenum. The talks and the poster presentations discuss a broad range of topics, ranging from CMC-corpus construction to corpus analysis including methodological discussions and inter- and multidisciplinary co-operation with other scientific fields essential to research on Computer-Mediated Communication.

The two keynote talks are held by Prof. Dr. Stephanie Evert (Friedrich-Alexander-University of Erlangen-Nürnberg, Germany) and Dr. Gavin Brookes (Lancaster University).

Prof. Dr. Stephanie Evert is Chair for Corpus- and Computational Linguistics at Friedrich-Alexander-Universität Erlangen-Nürnberg and elected member of several high-profile scientific organizations and institutions such as the Bavarian Academy of Science and the German Research Council. She has published numerous high-quality papers in outstanding international journals across linguistics, e. g. in computational linguistics, corpus linguistics, computer-mediated communication, and discourse analysis. She also leads several excellent scientific projects. One of them is the project *Reading Concordances in the 21st Century* supported by the Arts and Humanities Research Council (AHRC) and the Deutsche Forschungsgemeinschaft (DFG). Information on the project can be found here: <https://www.dhss.phil.fau.eu/research/current-projects/reading-concordances-in-the-21st-century-rc21/>. Stephanie Evert will deliver the first keynote *Studying Discourse in Social Media: Challenges*

& *Opportunities*'. More information on Prof. Evert's research activities is listed as follows: <https://www.linguistik.phil.fau.de/person/prof-dr-stephanie-evert/>

Dr. Brookes (Department: School of Social Sciences at Lancaster University) is Reader in Linguistics and UKRI Future Leader Fellow with an interest in corpus linguistics, discourse analysis and health communication. He is associate Editor of the *International Journal of Corpus Linguistics* (John Benjamins), co-Editor of the *Corpus and Discourse* book series (Bloomsbury, with Michaela Mahlberg) as well as co-Editor of the *Critical Discourse Studies* (Cambridge University Press, with Veronika Koller). In addition, Gavin Brookes is fellow of the Royal Society for Arts, Manufactures and Commerce. (More scientific information on Dr. Brookes' research activities can be found as follows: <https://www.lancaster.ac.uk/social-sciences/people/gavin-brookes.>)

Gavin Brookes is the PI of his research project '*Public Discourses of Dementia: Challenging Stigma and Promoting Personhood*' (funded £1 million by UKRI) and he will deliver one of the two keynote talks on 'Studying language and identity in a corpus of computer-mediated communication with (and without) sociodemographic metadata'.

In addition to the keynote talks, the presentations of the talks, and the poster presentations, the conference contributes to community-building and training of new methods. Participants are invited therefore to attend a presentation by CLARIN aiming at the construction of a new network as well as a tutorial session by our keynote Stephanie Evert. Prof. Evert will give a tutorial on '*Reading concordances with algorithms*', developed by Nathan Dykes, Stephanie Evert, Michaela Mahlberg, and Alexander Piperski (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany).

Our aim is to provide valuable new theoretical and methodological insights into CMC. We have endeavored to highlight the great social relevance of CMC research and to focus additionally on diversity, participation, and inclusion in Computer-Mediated Communication. The commitment of CMC research to society, science, and social diversity has provided CMC with new impetus for years and will therefore be discussed in many ways including the keynote talks and also numerous lectures and poster presentations this year. The language-related features of diversity, inclusion, and participation in CMC present linguistics with theoretical and methodological challenges that we can only overcome through interdisciplinary and multidisciplinary collaboration with the social sciences. We are very pleased to host such interdisciplinary and multidisciplinary presentations, especially with data science, law, and philosophy, at CMC 2025.

We would like to thank our colleagues who contributed to the conference and to this volume with their talks and posters. We would also like to express our gratitude to the members of the steering committee (Dr. Steven Coats, Prof. Dr. Julien Longhi, Prof. Dr. Reinhild Vandekerckhove, and Dr. Lieke Verheijen) and the international scientific committee. We thank the University of Bayreuth for hosting us and are very grateful to Prof. Dr. Karin Birkner (Chair for German Linguistics at the University of Bayreuth) for her organizational support. Fábíán also thanks the Bavarian Research Institute for Digital Transformation Munich (bidt) at the Bavarian Academy of Science, of which she is appointed member of, as well as well as the Bavarian Ministry of Science, Research and Art for their financial support since the conference is co-financed by funds that Fábíán received from the two institutions for her

research project ,*The communicative realization of inclusion for people with disability in social media*' and for the support of her academic career as one of the seven post-docs from all research fields across Bavarian universities appointed to the Bavarian Research Institute for Digital Transformation in 2022 (more information here: <https://www.gl.uni-bayreuth.de/de/team/A-Fabian/index.php>). Last, but not at least, we thank Vanessa Tschörtner, student assistant in Fábíán's research project, for her high-level of commitment and great organizational support of the CMC 2025.

The CMC 2025-edition would like to foster inspiring exchanges. In addition, it aims at a significant contribution for strengthening the international CMC-community including excellent scientists, who work on corpus building, data collection, data annotation, corpus analysis, and further methodological and theoretical implications using social media corpora and further corpora essential to Computer-Mediated Communication for collaborative research and infrastructures in the humanities and beyond.

Bayreuth, 31st of August 2025

On behalf of the organizing committee

Annamária Fábíán and Igor Trost

# Strategic Transparency or Deliberate Ambiguity? A Corpus-Assisted Multimodal Analysis of Airline CSR Communication on LinkedIn

Fabiola Notari

University of Modena and Reggio Emilia, Italy  
E-mail: fnotari@unimore.it

## Abstract

Airline companies face intense scrutiny concerning their societal and environmental impacts. As such, they increasingly rely on social media for Corporate Social Responsibility (CSR) communication. However, the inherently multimodal nature of these platforms complicates objective assessments of transparency. This paper introduces and empirically tests an integrated analytical framework for classifying multimodal CSR signals (*soft*, *semi-hard*, *hard*), enabling a systematic examination of how transparency is strategically constructed online. Drawing on a purpose-built corpus of LinkedIn posts from four major international airlines (Delta Air Lines, British Airways, ITA Airways, and China Southern Airlines), representing distinct US, Italian (EU), and Chinese communicative contexts, the analysis combines Signalling Theory, Systemic Functional Linguistics (SFL), and Multimodal Discourse Analysis (MDA). Unlike previous approaches, this framework integrates process-driven linguistic annotation and multimodal coding, enabling robust, replicable comparison across institutional contexts and highlighting practices that either foster or obscure transparency. The findings reveal that, while all companies provide clear self-presentation and some accessible data, most favour *soft* and *semi-hard* signals that limit verifiable, externally validated information, with *hard* signals remaining rare. Ambiguity and partial disclosure are thus strategically preferred over full transparency—underscoring how CSR communication, in practice, serves primarily to enhance corporate image rather than maximise accountability. By bridging discourse analysis with transparency metrics, the study demonstrates how digital CSR signals are classified and how strategic ambiguity and selective disclosure affect stakeholder perceptions and the credibility of corporate discourse in digital environments.

**Keywords:** Transparency, Multimodal Discourse Analysis, Social Media Communication, Signalling Theory, Corporate Social Responsibility

## 1. Introduction

Every year, airline companies publish thousands of social media posts dedicated to sustainability and Corporate Social Responsibility (CSR). On LinkedIn alone, over 10,000 CSR-related posts appeared in 2024, underlining the intense reputational scrutiny and the centrality of digital self-presentation for the sector. Yet, the key question remains: How transparent are these digital claims, and how is transparency itself discursively and visually constructed? The challenge is intensified by the inherently multimodal character of platforms such as LinkedIn, where text, visuals, and interactive features blend to produce subtle (and often ambiguous) communicative effects. While recent research has analysed aspects of corporate CSR discourse, few studies have adopted a truly integrated multimodal and corpus-assisted approach, nor have they systematically interrogated the *continuum* between disclosure and omission in digital CSR signalling. This study addresses this gap by introducing and empirically applying an original, replicable framework that classifies CSR signals as *soft*, *semi-hard*, or *hard*—capturing not only their accessibility and informativity, but also the strategic ways in which omission and ambiguity are mobilised. Drawing on Signalling Theory, Systemic Functional Linguistics (SFL), and Multimodal Discourse Analysis (MDA), the framework enables robust, cross-context comparison of digital CSR performance across linguistic and visual dimensions. The investigation is guided by three research questions: *RQ1*: What are the most salient CSR themes (e.g., environmental sustainability, community engagement, governance) in the digital multimodal CSR discourse of airline companies on LinkedIn? *RQ2*: How do these

companies strategically construct transparency, as evidenced by their use of *soft*, *semi-hard*, and *hard* signals? *RQ3*: How are these transparency signals linguistically, visually, and semiotically constructed across the corpus?

The remainder of this paper is structured as follows: Section 2 reviews the relevant literature, Section 3 introduces the theoretical framework, and Section 4 details the methodology. Section 5 presents the core findings, illustrated through both quantitative mapping and an in-depth qualitative case analysis. Concluding remarks and avenues for further research are outlined in Section 6.

## 2. Literature review

Recent scholarship underscores transparency as a central strategic element in Corporate Social Responsibility (CSR) communication, especially amidst public skepticism and greenwashing concerns (Kim & Lee, 2018; Lee & Comello, 2018). It is recognized as essential for building trust and mitigating skepticism through accountability and stakeholder participation (Baraibar-Diez & Luna-Sotorrió, 2018; Kashyap et al., 2020). Indeed, transparency is conceptualized beyond mere factual disclosure; it requires substantial information and active stakeholder involvement to effectively reduce consumer skepticism, particularly in stigmatized industries. More recently, the concept has been expanded to “performance transparency”—the intentional and objective provision of information on corporate actions to signal sincerity (Liu et al., 2023). This approach, advocating for consistent and verifiable practices, aligns closely with the notion of *hard* evidential signals central to this study. However, social media platforms significantly complicate these efforts. Described as the “Wild West” of CSR communication (Tench & Jones, 2015), their chaotic

nature risks message “co-destruction” if transparency is inadequate. Empirical studies confirm that firms often resort to one-way “stakeholder information strategies” (Vitellaro et al., 2022) or engage in “parallel talking” on non-core issues (Gómez-Carrasco et al., 2021), leaving the platforms’ potential for authentic, credibility-building engagement largely untapped (Yang et al., 2018). Taken together, these studies underscore the complexity of transparency in CSR communication. While recent work—such as Poppi’s (2025) study of airline emission disclosures—has shown how textual choices and omissions can subtly mask strategic ambiguity, a critical gap remains in systematically analysing how these processes unfold within the inherently multimodal environment of social media. In particular, there is still limited research on how omission, vagueness, and semiotic design interact to shape transparency or ambiguity in real-world digital CSR communication. The present study addresses this need by employing an integrated framework to analyze real-world social media content, thus advancing ecological validity and addressing the research gaps identified by previous literature.

### 3. Theoretical framework

This study introduces an innovative, integrated framework to analyze the complex construction of transparency in CSR communication on social media. Drawing on Signalling Theory from economics (Spence, 1973), this framework operationalizes the concept of communicative signals. The central contribution of this framework is a novel typology that classifies CSR signals as *soft*, *semi-hard*, or *hard* based on their strategic balance of accessibility and informativity.

### 4. Methodology

#### 4.1 The LinkedIn Corpus

This study draws its empirical basis from a purpose-built corpus compiled from the official English-language LinkedIn pages of four major international airlines: Delta Air Lines (US), British Airways (UK), ITA Airways (Italy/EU), and China Southern Airlines (China). To ensure a data-driven and unbiased sample, the 55 most recent posts from each company were collected in reverse chronological order (May 2023–July 2025), resulting in a total corpus of 220 posts. This approach—deliberately avoiding pre-selection via CSR-related hashtags—provides a more accurate estimation of the prominence and nature of CSR topics within each company’s overall communication strategy. Only posts with English-language captions were included, and reshares without original commentary were excluded. The final dataset thus comprises 220 posts, each containing both textual and visual content.

#### 4.2 Analytical framework

The analytical process was structured into three sequential phases. In the first phase, all 220 LinkedIn posts (55 per airline) were manually screened and annotated using INCEpTION (Klie et al., 2018) to identify CSR-related

content. Relevant posts were then thematically categorised into inductively derived micro-themes, which were further grouped into broader macro-domains. Basic descriptive and comparative statistics were used to explore thematic distribution across airlines. The second phase focused on how transparency was signalled through three dimensions: internal informativity (self-reported data), external accessibility (hyperlinks), and external informativity (third-party validation). Each post was coded along these dimensions using a binary scheme (1 = present, 0 = absent), and subsequently classified as a *soft*, *semi-hard*, or *hard* signal depending on its degree of evidentiary support. This classification enabled cross-airline comparison of transparency strategies. The final phase examined how these signals were discursively and visually constructed. Linguistic annotation followed the principles of Systemic Functional Linguistics and Appraisal Theory (Halliday, 1994; Martin & White, 2005), while visual and symbolic resources were interpreted through corpus-assisted multimodal analysis. Key semiotic processes—such as iconisation, recursivity, and erasure (Irvine & Gal, 2000; Notari, 2024)—were used to identify how meaning and credibility were constructed across modalities.

### 5. Findings

#### 5.1 Illustrative Example: China Southern Airlines’ ‘Green Leadership’ Signal

A May 2025 LinkedIn post by China Southern Airlines (see Fig. 1) announced the release of what it called “the industry’s first White Paper on Green Development,” asserting its commitment with the phrase “China Southern Airlines prioritizes climate action” and referencing compliance with IFRS S2 standards. Linguistically, the use of declarative clauses and policy-oriented relational processes (e.g., ‘We follow IFRS S2 standards in governance, strategy, risk, and metrics’) indicates high internal informativity, grounded in formal positioning. However, the post does not provide specific quantitative indicators (e.g., emission metrics or timelines), and no third-party validation is mentioned—thus limiting external informativity. Multimodally, the image of a 787 Dreamliner iconises *green innovation*, visually reinforcing the airline’s sustainability narrative. The visual layer is emotionally resonant and symbolic, but lacks embedded data or external logos. Despite referring to a detailed White Paper, the post provides no hyperlink or attachment, thereby reducing external accessibility. This combination—textual policy assertion without supporting metrics, emotionally symbolic visuals, and the absence of direct access or third-party validation—positions the message as a *semi-hard* signal. It constructs credibility through strategic self-presentation while avoiding full verifiability. As such, the post illustrates how transparency can be performed through curated omission and selective accessibility, particularly within highly visible environmental claims.



Figure 1: China Southern Airlines Post

## 5.2 Quantitative Overview

### 5.2.1 Thematic Distribution of CSR Posts (RQ1)

The quantitative analysis of 220 LinkedIn posts (55 per airline) reveals clear cross-airline variation in CSR visibility and thematic focus. ITA Airways published the highest proportion of CSR-related posts (60.0%; 33/55), followed by Delta Air Lines (52.7%; 29/55), China Southern Airlines (41.8%; 23/55), and British Airways (34.5%; 19/55). Table 1 presents the internal distribution of CSR content across the three macro-themes. Community & Social Engagement is dominant across all carriers, particularly for Delta (75.9%) and ITA (51.5%). Governance & Partnerships is especially salient for ITA (39.4%), while Environmental Sustainability remains marginal throughout, never exceeding 9.1% of CSR posts. These differences were statistically significant ( $\chi^2 = 46.12$ ,  $p < 0.00001$ ), indicating distinct strategic priorities in airline CSR communication.

Theme	Delta Air Lines	China Southern	British Airways	ITA Airways
Environmental Sustainability	6.9%	9.1%	5.3%	6.1%
Community & Social Engagement	75.9%	52.2%	63.2%	51.5%
Governance & Institutional Partnerships	13.8%	17.4%	31.6%	39.4%

Table 1: Distribution of CSR Themes by Airline (% of CSR-related posts)

### 5.2.2 Strategic construction of transparency (RQ2)

CSR-related posts were classified into three transparency signal categories—*Soft*, *Semi-Hard*, and *Hard*—based on

the presence of self-reported quantitative data, hyperlinks, and third-party validation (see Methodology). The results, summarised in Table 2, reveal highly significant cross-airline variation in their strategic communication of transparency ( $\chi^2 = 81.82$ ,  $p < .00001$ ). ITA Airways relies predominantly on *Semi-Hard* signals (93.9%), systematically pairing quantitative claims with accessible references, but only rarely providing full external validation. In contrast, *Delta Air Lines* (58.6%) and *China Southern Airlines* (69.6%) primarily favour *Soft* signals, characterised by symbolic or emotionally resonant narratives that typically lack robust substantiation. British Airways adopts a balanced strategy, distributing its CSR communication relatively evenly between *Soft* (36.8%) and *Semi-Hard* (63.2%) signals. Across all airlines, *Hard* signals—representing comprehensive transparency with complete external validation—remain exceptionally rare, appearing minimally in ITA Airways (3.0%) and Delta Air Lines (10.3%), and completely absent in British Airways and China Southern Airlines. Collectively, these findings underscore a clear industry preference for strategically managed ambiguity and selective disclosure rather than fully verifiable transparency, highlighting the reputational and communicative risks airlines perceive in providing fully externally validated claims.

Signal Category	Delta Air Lines (n=29)	China Southern Airlines (n=23)	British Airways (n=19)	ITA Airways (n=33)
Soft	58.6%	69.6%	36.8%	3.0%
Semi-Hard	31.0%	30.4%	63.2%	93.9%
Hard	10.3%	0.0%	0.0%	3.0%

Table 2: Transparency Signals by Airline (% of CSR-related posts)

### 5.2.3 Accessibility vs. Informativity strategic profiles (RQ3)

The corpus-assisted multimodal analysis reveals clear qualitative distinctions in how *soft*, *semi-hard*, and *hard* transparency signals are constructed linguistically, visually, and semiotically. Linguistically, soft signals frequently rely on emotionally resonant language, realised mainly through affective and material processes (e.g., ‘support,’ ‘connect’) paired with abstract or affectively charged objects (e.g., ‘hope,’ ‘community’), without offering quantifiable details or external validation. *Semi-hard* signals, while still predominantly narrative, integrate internally reported data using more specific material and relational processes—for instance, claims of ‘reduced CO<sub>2</sub> emissions by 12%’ or ‘implemented new accessibility features,’ albeit without external verification. *Hard* signals, though exceptionally rare, explicitly provide externally validated claims or third-party recognition, most often realised through dense declarative mood and institutionalised material processes (e.g., ‘scored 100% on the Disability Equality Index’). Visually and semiotically, these linguistic patterns align closely with the strategic use of imagery and design. *Soft* signals typically employ emotionally connoted visuals

(children, volunteers, or smiling staff), with low informational density and a prevalence of iconisation of abstract CSR values—mirroring the use of symbolic material processes in the text. *Semi-hard* signals shift towards professional and institutional imagery—branded events, uniforms, procedural scenes—sometimes including numeric overlays but usually remaining cautious in visual detail, often reinforcing relational processes and procedural credibility. *Hard* signals differ markedly, foregrounding third-party logos, visible badges, certificates, and numeric data explicitly embedded in the visual field, thus visually anchoring external credibility and accountability. Semiotic strategies—iconisation, recursivity, and erasure—further support this continuum. *Soft* signals rely heavily on the iconisation of abstract values, while semi-hard signals often use institutional motifs to reinforce professionalism and trust, with recursivity ensuring thematic continuity through repeated verbal and visual cues. *Hard* signals explicitly integrate external evidence and data through consistent repetition across modes, minimising erasure. Conversely, erasure—or the strategic omission of expected details—dominates soft and *semi-hard* signals, preserving interpretative openness and limiting direct scrutiny, while *hard* signals minimise erasure by fully integrating evidence across textual and visual modes, ensuring complete external verifiability. Overall, these qualitative insights—framed through the lens of systemic functional linguistics and multimodal discourse analysis—highlight strategic corporate communication patterns. Airlines predominantly favour partial transparency through *soft* and *semi-hard* signals, strategically balancing narrative appeal, material and relational process selection, and reputational risk, while full transparency (*hard* signals) remains rare and carefully managed.

## 6. Conclusions and contribution

This study demonstrates that within the multimodal CSR discourse of major airlines on LinkedIn, companies consistently foreground Community & Social Engagement, although strategic divergence clearly emerges in how transparency is communicated. Most airlines opt predominantly for *soft* and semi-hard signals, balancing narrative persuasion and partial disclosure, thereby preserving significant zones of ambiguity. *Hard* signals, characterised by externally validated claims, remain notably scarce across all carriers. From a theoretical perspective, this research contributes a novel analytical framework that systematically integrates Signalling Theory, Systemic Functional Linguistics, and Multimodal Discourse Analysis, allowing for nuanced, replicable assessments of transparency within digital corporate communication. Empirically, the study provides insights into the discursive mechanisms by which airlines strategically leverage ambiguity and selective disclosure to balance reputational control and stakeholder accountability. Practically, the framework offers robust tools for stakeholders and communicators in the field of CMC to critically evaluate and enhance the credibility of

CSR messaging in digital environments, thereby promoting more transparent, accountable, and effective digital corporate communication practices.

## 7. References

- Bibliographical references should be listed in alphabetical order at the end of the article. The title of the section, "References", should be a level 1 heading. The first line of each bibliographical reference should be justified to the left of the column, and the rest of the entry should be indented by 0.35 cm.
- Baraibar-Diez, E., & Luna-Sotorrío, L. (2018). The mediating effect of transparency in the relationship between corporate social responsibility and corporate reputation. *Review of Business Management*, 20(1), 5–21.
- Gómez-Carrasco, P. P., Guillamón-Saorín, E., & García Osma, B. (2021). Stakeholders versus firm communication in social media: The case of Twitter and corporate social responsibility information. *Business Ethics: A European Review*, 30(4), 483–498.
- Halliday, M. A. K. (1994). *An Introduction to Functional Grammar* (2nd ed.). London: Edward Arnold.
- Irvine, J. T., & Gal, S. (2000). Language ideology and linguistic differentiation. In P. V. Kroskrity (Ed.), *Regimes of Language: Ideologies, Politics, and Identities* (pp. 35–84). Santa Fe, NM: School of American Research Press.
- Kashyap, R., Menisy, M., Caiazzo, P., & Samuel, J. (2020). Transparency versus performance in financial markets: The role of CSR communications. *arXiv preprint, arXiv:2008.03443*.
- Kim, H., & Lee, T. H. (2018). Strategic CSR communication: A moderating role of transparency in trust building. *International Journal of Strategic Communication*, 12(2), 107–124.
- Klie, J.-C., Eckart de Castilho, R., & Gurevych, I. (2018). The INCEPTION Platform: Machine-assisted and knowledge-oriented interactive annotation. *Proceedings of the 27th International Conference on Computational Linguistics: System Demonstrations*, 5–9.
- Kress, G., & van Leeuwen, T. (2006). *Reading Images: The Grammar of Visual Design* (2nd ed.). London: Routledge.
- Lee, T. H., & Comello, M. L. N. G. (2019). Transparency and industry stigmatization in strategic CSR communication. *Management Communication Quarterly*, 33(1), 68–85.
- Liu, Y., Heinberg, M., Huang, X., & Eisingerich, A. B. (2023). Building a competitive advantage based on transparency: When and why does transparency matter for corporate social responsibility? *Business Horizons*, 66(4), 517–527.
- Martin, J. R., & White, P. R. R. (2005). *The Language of Evaluation: Appraisal in English*. New York: Palgrave Macmillan.
- Notari, F. (2024). Cracking the code of change in EU legal discourse: signifying practices shaping inclusion for the vulnerable in the digital age. *Comparative*

- Legilinguistics*, 60, 342–383.
- Poppi, F. (2025). Airlines' emission disclosures: The fine line between opportunity and environmental inaction. *Iperstoria*, (25).
- Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics*, 87(3), 355–374.
- Tench, R., & Jones, B. (2015). Social media: The Wild West of CSR communications. *Social Responsibility Journal*, 11(2), 290–305.
- Vitellaro, F., Satta, G., Parola, F., & Buratti, N. (2022). Social media and CSR communication in European ports: The case of Twitter at the Port of Rotterdam. *Maritime Business Review*, 7(1), 1–21.
- Yang, J., Basile, K., & Letourneau, O. (2018). The impact of social media platform selection on effectively communicating about corporate social responsibility. *Journal of Marketing Communications*, 26(1), 65–87.