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## Artificial Intelligence in Cyber Public Relations: A Systematic Review

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**Abstract** - *The rapid advancement of Artificial Intelligence (AI) has transformed digital communication, yet its integration within cyber public relations remains theoretically fragmented. This study aims to systematically synthesize how AI is positioned and utilized in contemporary cyber public relations literature. Using a Systematic Literature Review (SLR) guided by the PRISMA 2020 protocol, this study analyzes Scopus-indexed journal articles published between 2020 and 2025. A total of 18 eligible studies were selected through a multi-stage screening process and examined using thematic synthesis. The findings reveal that existing research is dominated by chatbot and conversational AI applications focusing on micro-level interaction efficiency, while empirical studies on long-term relational outcomes, particularly public trust, remain limited. The analysis also identifies methodological imbalance, organization-centric bias, and insufficient attention to AI governance. This study argues that the influence of AI on organization–public relationships is indirect and mediated by strategic organizational orchestration. Theoretically, AI is repositioned as a relational infrastructure, contributing to the development of cyber public relations in the AI era.*

**Keywords:** *Artificial Intelligence; Cyber Public Relations; Systematic Literature Review; Relationship Management; AI Governance*

**Abstrak** - Perkembangan pesat Artificial Intelligence (AI) telah mentransformasi komunikasi digital, namun integrasinya dalam cyber public relations masih menunjukkan fragmentasi teoretis. Penelitian ini bertujuan untuk mensintesis secara sistematis bagaimana AI diposisikan dan dimanfaatkan dalam literatur cyber public relations kontemporer. Penelitian menggunakan pendekatan Systematic Literature Review (SLR) berbasis protokol PRISMA 2020 terhadap artikel jurnal terindeks Scopus periode 2020–2025. Sebanyak 18 artikel terpilih melalui proses seleksi berlapis dan dianalisis menggunakan pendekatan tematik. Hasil penelitian menunjukkan bahwa literatur didominasi oleh penggunaan chatbot dan conversational AI pada level efisiensi interaksi mikro, sementara kajian empiris mengenai dampak relasional jangka panjang, khususnya kepercayaan publik, masih terbatas. Analisis juga mengungkap ketimpangan metodologis, bias organisasi-sentris, serta minimnya perhatian terhadap tata kelola AI. Penelitian ini menegaskan bahwa pengaruh AI terhadap relasi organisasi–publik bersifat tidak langsung dan dimediasi oleh orkestrasi strategis organisasi.

**Kata Kunci:** *Artificial Intelligence; Cyber Public Relations; Systematic Literature Review; Relationship Management; Tata Kelola AI*

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### Introduction

The swift progression of Artificial Intelligence (AI) in recent years has transformed organizational communication methods, particularly in the field of cyber public relations. The

incorporation of technologies like chatbots, machine learning, and generative AI allows enterprises to automate responses, tailor interactions, and improve the scalability of digital communication (Florea & Croitoru, 2025). This development has prompted a transition from reactive digital communication to progressively predictive and data-driven communication systems. Nonetheless, despite the rapid deployment of technology, the academic literature remains conceptually fragmented in elucidating how AI significantly influences the quality of organization–public relationships (Ye et al., 2025). This disparity prompts a crucial inquiry regarding whether AI just improves communication efficiency or fundamentally transforms the principles of relationship management in digital public relations (Hughes et al., 2025).

Recent research indicate that AI is increasingly integrated into public relations functions, especially in social listening, stakeholder service automation, and content generation using generative AI (Dwivedi et al., 2023). These studies primarily highlight enhancements in response velocity, operational efficacy, and message customization capabilities. Nonetheless, most research continues to focus on the aspects of technology adoption and immediate communication efficacy (Dwivedi et al., 2021). Systematic investigations exploring the relational consequences of AI particularly regarding engagement, trust, and the quality of long-term relationships are still relatively scarce and disjointed (Frank et al., 2023). Thus, the role of AI as a relational infrastructure in cyber public relations has not been clearly defined.

This conceptual constraint becomes increasingly significant inside a highly computerized communication environment. AI has evolved from a mere communication conduit to a semi-agent entity that mediates interactions between organizations and their audiences (Molla & Ahsan, 2025). In this setting, public relations strategies that prioritize efficiency may neglect critical concerns such as algorithmic openness, responsibility in automated communication, and the durability of public trust (Frank et al., 2023). Numerous studies caution that the use of AI without sufficient governance frameworks may incite new reputational concerns, such as algorithmic bias, disinformation, and the deterioration of organizational credibility (Alrawahna et al., 2025).

The development of generative AI following 2022 amplifies the seriousness of these issues. This technology enhances the rapid production and dissemination of digital messages; however, it may undermine the authenticity of organization–public relationships if not complemented by transparent and ethical communication design (Halim & Hidayat, 2025). The current literature has insufficiently elucidated how organizations might coordinate AI capabilities, institutional preparedness, and communication governance to guarantee that technical efficiency does not undermine long-term relational quality (Harlacher & Feggeler, 2025). Consequently, a more methodical synthesis is necessary to rigorously delineate advancements in this domain.

Methodologically, AI research in public relations is mostly characterized by perceptual surveys and conceptual investigations, whereas experimental, longitudinal, and multi-stakeholder designs are comparatively scarce (Riandhi et al., 2025). This design limits the robustness of causal inference, especially in elucidating the cumulative dynamics of trust. Furthermore, the technology-focused inclination observed in certain literature indicates that the incorporation of the relationship management approach is yet inadequately developed (Sapkota et al., 2026). This conceptual dispersion and methodological disparity underscore the necessity for a more thorough consolidation based on systematic literature reviews.

While numerous reviews have analyzed AI in digital communication, research explicitly mapping AI within the cyber public relations framework, particularly concerning relational dynamics, is limited. The difference is substantial as cyber public relations prioritizes discussion, involvement, and trust as fundamental outcomes that cannot be entirely elucidated through the logic of technology adoption alone (Brauner et al., 2025). In the absence of a

targeted synthesis, the advancement of the literature may remain disjointed and inadequately attuned to relational and ethical considerations.

Building on these constraints, a more thorough analytical approach is needed to comprehend AI as a relational and structural force in communication processes as well as a technological advancement. The growing dependence on algorithmic systems indicates that AI is progressively changing the structure of public-organization interaction (Farhan et al., 2025). In this sense, cyber public relations should be seen as a field that is increasingly controlled by algorithmic logic, where data-driven systems have an impact on relational results, communication visibility, and engagement patterns.

Despite the growing scholarly attention devoted to Artificial Intelligence (AI) in communication and public relations, existing studies have predominantly focused on technological adoption, communication automation, and operational efficiency (Kusumo & Mariana, 2025). Research has extensively examined the use of chatbots, conversational agents, and generative AI applications to improve responsiveness, personalization, and stakeholder engagement, highlighting the increasing strategic relevance of AI in organizational communication (Affandi et al., 2025). While these studies have generated important insights into the functional capabilities of AI, they remain largely concentrated on technology utilization and performance outcomes (Gloria et al., 2024).

Consequently, the broader relational implications of AI within cyber public relations remain insufficiently understood. In particular, limited attention has been devoted to explaining how AI influences trust formation, engagement sustainability, legitimacy, and long-term relationship quality between organizations and publics. Moreover, existing research tends to examine AI applications in isolation, with relatively little consideration of how technological capability, organizational readiness, and communication governance interact to shape relational outcomes. As a result, the mechanisms through which AI mediates organization–public relationships in increasingly algorithmic communication environments remain under-theorized.

Accordingly, a significant research gap exists in the absence of an integrative and relationally grounded framework capable of systematically explaining how technological capability, organizational readiness, and communication governance collectively influence organization–public relationships within cyber public relations. Addressing this gap is increasingly important as organizations rely on AI not only to enhance communication efficiency but also to build and maintain stakeholder trust in digitally mediated environments.

To address this limitation, the present study develops an AI-mediated strategic relationship management framework that reconceptualizes Artificial Intelligence as a relational infrastructure rather than merely a communication technology. Through a systematic synthesis of the literature, this study contributes a more comprehensive theoretical understanding of how AI shapes trust, engagement, legitimacy, and relationship quality, while extending relationship management theory into the context of algorithmically mediated communication.

This study presents the primary research question: how is Artificial Intelligence understood and utilized in the cyber public relations literature to facilitate public involvement and trust? This study seeks to (1) systematically synthesize advancements in AI research related to cyber public relations from 2020 to 2025, utilizing Scopus-indexed publications, (2) identify prevailing thematic patterns and research deficiencies, and (3) develop a comprehensive AI-mediated cyber public relations model that elucidates the mechanisms of strategic transformation and their relational consequences. This study aims to theoretically enhance the fragmented literature and establish a conceptual framework for more strategic and accountable cyber public relations techniques in the era of artificial intelligence.

## Methodology

This study employed a systematic literature review (SLR) method to comprehensively map and synthesize the development of research on Artificial Intelligence (AI) within the domain of cyber public relations. The review process followed the PRISMA 2020 guidelines to ensure procedural transparency, traceability of the selection process, and reproducibility of findings (Page et al., 2021). The SLR approach was selected for its capacity to synthesize fragmented findings and discern conceptual patterns across studies in the digital communication literature (Uddin et al., 2025).

This review is positioned as a theory-building synthesis that specifically examines Artificial Intelligence within the relational domain of cyber public relations. While previous review studies have broadly explored AI adoption in digital communication, marketing, journalism, and organizational technology management, limited attention has been devoted to understanding how AI mediates organization–public relationships. In particular, the long-term relational implications of AI, the role of communication governance, organizational readiness, and the mechanisms through which AI influences trust, engagement, legitimacy, and relationship quality remain underexplored. Accordingly, this review seeks to consolidate fragmented evidence and develop a more integrative understanding of AI-mediated strategic relationship management. The primary contribution of this review is not merely to summarize existing studies but to identify conceptual gaps and propose an integrative framework linking technological capability, organizational readiness, and communication governance within cyber public relations.

Literature identification was conducted using the Publish or Perish (PoP) software in conjunction with the Scopus database. Scopus was selected due to its comprehensive coverage of internationally recognized journals in communication, management, and digital technology, making it suitable for highlighting the latest developments in AI research pertinent to public relations. The implementation of PoP established a systematic and consistent method for documenting search parameters, thereby enhancing the auditability of the review process. The study focused on the TITLE-ABS-KEY field to guarantee thematic precision. The search string was developed through an iterative process of initial sensitivity testing, combining terms related to AI technologies with those relevant to the cyber public relations domain as detailed below:

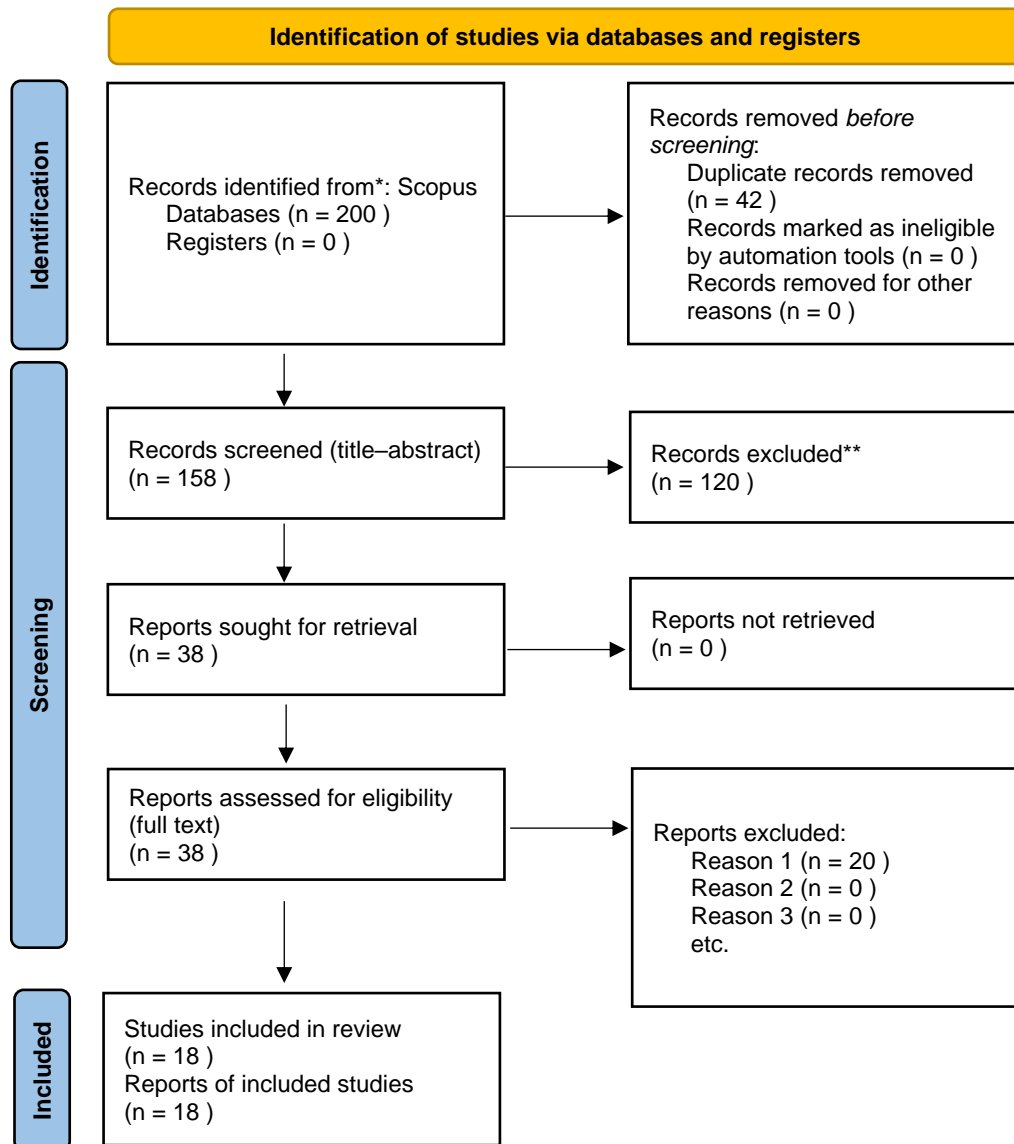
```
TITLE-ABS-KEY (  
  (“artificial intelligence” OR “generative AI” OR chatbot OR “machine learning”)  
  AND  
  (“public relations” OR “digital PR” OR “cyber public relations” OR “strategic  
  communication”)  
  AND  
  (engagement OR trust OR reputation OR relationship))
```

The search was limited to peer-reviewed journal articles published between 2020 and 2025 to ensure the currency and quality of sources. The search process was conducted in March 2025. Initial validation was performed by verifying whether key publications in the AI and public relations domain were successfully captured by the search string, thereby improving the sensitivity and specificity of the results (Strauss et al., 2025).

The selection process followed the PRISMA flow, which includes identification, screening, eligibility assessment, and final inclusion. The initial search via Publish or Perish yielded 200 records from Scopus. After removing 42 duplicate articles, 158 records remained for title and abstract screening. At this stage, 120 articles were excluded due to irrelevance to the focus on AI in cyber public relations. Subsequently, 38 articles underwent full-text evaluation, and 20 were excluded for failing to meet conceptual or methodological criteria. As a result, 18 articles met all inclusion criteria and were included in the final synthesis. To minimize selection bias, the screening process was conducted independently by two

researchers, with discrepancies resolved through discussion until consensus was achieved (Page et al., 2021). The complete selection flow is presented in the PRISMA 2020 diagram.

**Figure 1. Article Selection Flowchart Based on PRISMA 2020**



Based on Figure 1 above, it can be explained that the article selection process was conducted systematically using the PRISMA 2020 framework. At the identification stage, a total of 200 records were retrieved from the Scopus database. After removing 42 duplicate records, 158 articles remained for title and abstract screening. Subsequently, 120 articles were excluded due to their lack of relevance to the focus on Artificial Intelligence in cyber public relations. At the eligibility stage, 38 full-text articles were assessed, and 20 were excluded based on conceptual and methodological considerations. As a result, 18 studies met all inclusion criteria and were selected for the final synthesis. This structured process demonstrates the rigor and transparency of the review procedure, ensuring that only relevant and high-quality studies were included in the analysis. To ensure consistency and transparency throughout the article selection process, explicit eligibility criteria were established prior to the screening and full-text assessment stages. These criteria were developed to align the selected studies with the

objectives of the review and to ensure conceptual relevance to Artificial Intelligence in cyber public relations. The inclusion and exclusion criteria applied in this study are presented in Table 1.

**Table 1. Inclusion and Exclusion Criteria**

<b>Inclusion Criteria</b>	<b>Exclusion Criteria</b>
Peer-reviewed journal articles	Conference proceedings
Indexed in Scopus	Book chapters
Published between 2020–2025	Editorials and technical reports
Written in English	Dissertations and theses
Focus on AI in public relations, strategic communication, stakeholder engagement, trust, reputation, or relationship management	Studies focusing solely on technical or engineering aspects of AI
Relevant to cyber public relations and communication contexts	Studies lacking communication or public relations relevance

Based on Table 1, the inclusion and exclusion criteria were developed to ensure conceptual consistency and methodological rigor throughout the review process. Only studies directly relevant to artificial intelligence in public relations and strategic communication contexts were retained for further analysis, while studies lacking communication relevance or focusing exclusively on technical aspects of AI were excluded.

The selected articles were systematically analyzed to extract information regarding the type of AI technology, public relations domain, research context, methodological approach, theoretical orientation, and principal findings. The coding procedure consisted of three iterative stages. First, open coding was employed to identify key concepts, recurring issues, and emerging patterns across studies. Second, axial coding was conducted to organize related concepts into broader analytical categories. Third, selective coding was undertaken to establish higher-order thematic relationships and construct overarching conceptual patterns. Subsequently, an inductive thematic analysis supported by constant comparative analysis was performed to refine thematic categories and ensure conceptual consistency across studies. This process facilitated the identification of dominant research trajectories, conceptual gaps, and emerging directions in the literature on Artificial Intelligence and cyber public relations. The thematic analysis ultimately generated five major thematic clusters: relational interaction and stakeholder engagement, AI adoption and organizational readiness, crisis communication and misinformation management, professional capability and strategic transformation, and AI governance and ethical communication.

To enhance interpretive rigor, a quality-informed appraisal was performed for all included studies by evaluating the clarity of research design, transparency of sample reporting, appropriateness of analytical techniques, and conceptual relevance to cyber public relations. This framework was adapted from systematic review practices in digital communication studies (Li et al., 2024) and was applied indicatively to assess the strength of evidence rather than as a criterion for exclusion. The quality appraisal results informed the interpretation of findings and contributed to the overall robustness of the thematic synthesis.

To enhance analytical reliability and minimize interpretive bias, all coding procedures were conducted independently by two researchers using a shared coding matrix. The initial coding outcomes were compared to identify agreements and discrepancies. Any inconsistencies were subsequently resolved through iterative discussion until consensus was achieved. Although a formal intercoder reliability coefficient was not calculated, the consensus-based procedure ensured a high level of coding consistency throughout the review process. This procedure strengthened the credibility, dependability, and trustworthiness of the thematic synthesis by ensuring that thematic categories were not derived from a single researcher's

interpretation. Furthermore, the independent coding process contributed to the consistency and robustness of the analytical findings.

While the review procedures were structured with intention, it is important to recognize several methodological limitations. Initially, depending solely on one database (Scopus) might have led to the exclusion of pertinent publications that are indexed in other sources. This decision was made intentionally to ensure the consistency of source quality. Secondly, limiting the timeframe to 2020–2025 might have left out earlier foundational studies, even though this choice was made to highlight the latest advancements in AI in the context of cyber public relations. Third, thematic synthesis inherently involves interpretation and thus carries potential subjectivity, although this risk was mitigated through iterative coding and consensus discussions. Despite these limitations, the findings offer a strong conceptual framework for understanding AI advancements in cyber public relations.

The comprehensive methodology encompassing Publish or Perish search procedures, PRISMA-based selection, data extraction, and thematic synthesis was meticulously recorded to improve the transparency and reproducibility of this systematic review (Page et al., 2021).

## **Result and Discussion**

The PRISMA 2020-based selection reveals that, from 200 Scopus records produced between 2020 and 2025, merely 18 papers conceptually integrate Artificial Intelligence (AI) into the cyber public relations framework. This little proportion not only indicates the restricted quantitative scope of the study corpus but also implies that the theoretical framework of AI in the public relations field is still in its nascent stage. In summary, while the integration of AI in organizational communication is progressing swiftly, its theoretical framework in public relations literature remains incomplete. This discovery corresponds with the observation that the advancement of intelligent communication technologies frequently surpasses the evolution of the theoretical frameworks that underpin them (Trigka & Dritsas, 2025).

The temporal distribution of publications exhibits a significant increase post-2022, along with the increasing prominence of generative AI in the digital public realm. Nevertheless, the rise in publishing volume has not been matched by a corresponding enhancement in conceptual depth. The majority of studies still regard AI mainly as a tool for operational efficiency, such customer response automation, digital content optimization, or service speed enhancement, rather than as a strategic factor that can fundamentally alter organization-public connections. This pattern indicates that the cyber public relations sector is shifting from a phase of enthusiastic technology adoption to one focused on validating relationship impact, although this transition is not yet fully realized.

Methodologically, the examined corpus predominantly features survey-based and conceptual approaches, whereas longitudinal experimental designs and ecosystem-based studies are comparatively limited. This methodological arrangement has considerable epistemic consequences. The predominant assertions of AI-driven engagement and trust remain contingent upon transient user perceptions, therefore constraining the robustness of causal inference. Thus, the existing literature is more adept at elucidating apparent AI efficacy than at encapsulating the intricate and cumulative dynamics of long-term relational outcomes. This gap highlights that AI research in cyber public relations remains at a phase of paradigm development necessitating more rigorous empirical validation.

Furthermore, a technology-focused inclination persists in numerous research that emphasize AI system functionalities rather than the relationship dynamics they produce. This perspective risks oversimplifying the intrinsically dialogic, contextual, and multifaceted nature of organization–public communication. Contemporary public relations study has raised similar critiques, highlighting that the implementation of new technologies frequently occurs before

sufficient normative and relational contemplation (Zhao, 2024). The primary goal in this subject is not only to increase research output but also to enhance relational analytical frameworks that can comprehensively capture algorithmic mediation.

The observed publication pattern indicates that AI-driven cyber public relations is a rapidly evolving yet theoretically underdeveloped research area. This scenario presents a substantial opportunity for the current study to integrate existing topic patterns, pinpoint conceptual blind spots, and develop a more cohesive integrative framework for future AI research in public relations.

### Thematic Mapping and Empirical Evidence

To guarantee transparency and traceability of the synthesis, iterative inductive topic coding was performed on the 18 included articles. The analysis yielded five principal topic clusters that had considerable consistency across experiments. This mapping not only indicates thematic frequency but also demonstrates a conceptual transition in which AI is evolving from a mere automation tool to serving as relational infrastructure in cyber public relations.

The predominant theme pertains to the utilization of chatbots and conversational AI as intermediaries in organization-public interactions. The significance of this cluster suggests that the existing literature predominantly centers on the micro-interaction layer, especially with social presence, anthropomorphism, dialogic quality, and user experience. The second principal issue, organizational acceptance and readiness, emphasizes institutional considerations, digital competences, and structural preparedness for AI implementation. The crisis and disinformation represent a growing danger cluster, however research on AI governance is still very scarce.

The prevalence of chatbot-focused research indicates that the literature is mostly centered on operational communication, but the strategic orchestration aspect of AI in public relations has not been sufficiently examined. This tendency aligns with research indicating that intelligent communication technologies progress more swiftly in technical implementation than in strategic organizational transformation (Nasikhah et al., 2022). This fragmentation suggests that the domain of AI in cyber public relations has not yet attained a solid theoretical agreement. Table 1 offers a comprehensive mapping of AI kinds, public relations domains, important findings, and evidence levels throughout the collected papers, facilitating a transparent evidence trail and methodical tracing of the synthesis basis.

**Table 2. Integration of Themes and Studies (n = 18)**

Code	Type of AI	PR Domain	Theme	Key Focus
S1	Chatbot	Organizational communication	Relational	Interaction closeness
S2	Chatbot	Digital PR	Relational	Anthropomorphism
S3	Conversational AI	Engagement	Relational	Two-way dialogue
S4	Virtual agent	Stakeholder	Relational	Social presence
S5	AI interface	Online PR	Relational	Interaction experience
S6	AI service	Organizational	Relational	Relationship mediation
S7	Generative AI	PR practice	Adoption	Adoption drivers
S8	AI readiness	Agency	Adoption	Organizational readiness
S9	AI analytics	Strategic communication	Adoption	Decision support
S10	AI capability	Digital PR	Adoption	Competency
S11	AI implementation	Professional	Adoption	Implementation barriers
S12	AI monitoring	Crisis PR	Crisis	Issue detection
S13	AI analytics	Reputation	Crisis	Disinformation
S14	AI influence	Strategic	Crisis	Information warfare
S15	AI listening	Issue management	Crisis	Social listening

S16	AI literacy	Education	Capability	Competency gap
S17	AI training	Professional	Capability	Upskilling
S18	Network AI	Digital influence	Datafication	Relationship quantification

Based on Table 2 above, it can be explained that research on Artificial Intelligence in cyber public relations is predominantly centered on chatbot and conversational AI applications within organizational and digital communication contexts. The dominant themes are relational, including interaction closeness, anthropomorphism, dialogic communication, and user experience.

In addition to relational themes, the table also highlights emerging areas such as technology adoption, organizational readiness, crisis communication, and capability development. However, the overall distribution of studies indicates that most research remains concentrated at the operational level, with limited attention to long-term strategic and relational outcomes. This pattern suggests that the field is still in a developmental phase, where theoretical integration between technological capabilities and relational dynamics has not yet been fully established.

Cross-study analysis reveals that the literature predominantly focuses on initial operational and relational aspects, whereas the examination of long-term strategic effects is notably restricted. This study subtly questions the assumptions of technological determinism that AI adoption will inherently improve the quality of public relationships. The synthesis illustrates that the connection between AI and relational outcomes is mediated, contextual, and significantly reliant on strategic organizational orchestration.

### **AI as an Emerging Relational Infrastructure**

The thematic synthesis reveals that AI, specifically chatbots, is increasingly regarded as relational infrastructure in the context of cyber public relations. This transition signifies a critical change from computer-mediated communication to AI-mediated relationship management. In this configuration, AI transcends its role as a mere conduit for message distribution and begins to function as a semi-agentic actor, actively shaping public communication experiences in real time and adaptively.

However, the extent of the existing empirical evidence has not yet completely aligned with the transformational assertions presented in the literature. Many studies predominantly utilize short-term experimental designs or perceptual surveys, resulting in a significant gap in the examination of the longitudinal sustainability of AI-mediated trust. This limitation is significant as trust within the relationship management framework is cumulative, context-dependent, and develops through repeated interactions. In the absence of sufficient longitudinal evidence, assertions about the relational effects of AI tend to be more indicative than definitive.

A growing body of research highlights potential risks associated with AI-mediated interactions that lack transparent and human-centered governance. Inadequate algorithmic transparency, rigid conversational frameworks, or excessive automation in organizational communication can lead to unsettling outcomes and diminish institutional trustworthiness. The findings support the assertion that the effectiveness of AI in cyber public relations relies not only on technological advancement but also on ethical awareness, dialogic design, and responsible communication governance (Septiana, 2025).

This synthesis underscores the necessity of transitioning the analytical focus from simple technology deployment to the engineering of relational experiences. Organizations that implement AI without incorporating dialogic design principles and strong governance mechanisms may attain operational efficiency but fail to enhance long-term relationship

quality. AI in cyber public relations should be viewed as an evolving relational infrastructure necessitating more sophisticated strategic orchestration.

### Strategic Transformation and Theoretical Implications

This paper provides an integrative paradigm that places AI as a multifaceted enabler in the evolution of cyber public relations, based on cross-thematic synthesis. The suggested conceptual model arises from the synthesis of patterns frequently recognized in the reviewed literature. The results demonstrate that AI capabilities do not directly foster public trust; instead, they function through mechanisms of strategic transformation influenced by organizational preparedness, relational design, and communication governance.

From a public relations theoretical standpoint, our findings enhance relationship management theory by illustrating that algorithmic mediation is emerging as a novel structural layer in the development of organization–public connections. Prior studies has often posited a linear correlation between technology use and communication efficacy. This review affirms that the influence of AI is indirect, conditional, and reliant on intricate kinds of strategic orchestration (Sánchez et al., 2025).

Moreover, the synthesis recognizes AI governance as an area that is still inadequately understood within cyber public relations. As organizational communication becomes more automated, the need for algorithmic transparency, system accountability, and enhanced human oversight intensifies. The lack of strong governance frameworks may represent a significant weakness in the future application of AI in public relations practice. This paper proposes a transition from a technological adoption viewpoint to a more comprehensive framework of AI-mediated strategic communication.

This study illustrates that AI in cyber public relations is better conceptualized as a relational infrastructure functioning through complex mechanisms of strategic transformation, rather than being just framed within a technology adoption context as shown in previous evaluations. These findings indicate that organizational investment in AI necessitates enhanced competences, governance structures, and the design of relational experiences. In the absence of such integration, AI may provide immediate operational efficiency but fail to produce enduring strategic benefit.

### Methodological Quality Evaluation and Its Implications for the Synthesis

A rigorous quality assessment was performed for all included studies to prevent the synthesis from becoming an over-generalized aggregation. This phase is essential as variation in research design directly affects the robustness of the inferences derived from the examined literature. The appraisal was undertaken by evaluating the clarity of the research design, transparency of sample reporting, suitability of analytical procedures, and conceptual relevance to cyber public relations.

This evaluation was framed as a quality-informed synthesis instead of a score-based exclusion method, thereby maintaining the literature's comprehensiveness while allowing for a more balanced interpretation of the findings. Table 2 presents an overview of the distribution of methodological quality.

**Table 3. Quality Appraisal Matrix of Included Studies (n = 18)**

Quality Level	Assessment Criteria	Number of Studies	Percentage	Implications for the Synthesis
High	Clear design, transparent methods, robust analysis	7	38.9%	Provides a relatively strong inferential basis

Moderate	Adequately clear design, minor limitations	8	44.4%	Interpretation requires caution
Exploratory	Conceptual focus or limited data	3	16.7%	Indicative in nature

Based on Table 3 above, it can be explained that the methodological quality of studies in Artificial Intelligence and cyber public relations is largely categorized as moderate. Approximately 44.4% of the studies demonstrate adequate research design with minor methodological limitations, while 38.9% are classified as high-quality studies with clear research design, transparent reporting, and robust analytical approaches.

Meanwhile, 16.7% of the studies are categorized as exploratory, indicating conceptual contributions with limited empirical evidence. This distribution reflects that the field is still evolving and has not yet reached full methodological maturity. The findings highlight the need for more rigorous research designs, particularly longitudinal and experimental approaches, to strengthen the robustness and generalizability of future studies in this domain.

Table 3 illustrates that the AI literature in cyber public relations remains predominantly characterized by studies demonstrating a moderate degree of methodological sophistication. This arrangement indicates that the discipline is experiencing epistemic expansion, characterized by rapid conceptual exploration that has not yet been fully complemented by the enhancement of longitudinal and experimental research approaches.

This conclusion suggests that some claims in the literature should be viewed as evolving trends backed by diverse data rather than as absolute generalizations. Research with greater methodological rigor offers a more solid inferential basis, while findings from exploratory investigations should be regarded as initial indicators that enhance the wider interpretive context. This stratified methodology allows the synthesis to produce a more refined interpretation of the field's evolution.

### Cross-Study Patterns: Structure, Gaps, and Blind Spots

A cross-study analysis was performed to transcend mere thematic description, aiming to uncover dominant patterns and persistent weaknesses within the literature. This method enables a more organized representation of the field's knowledge framework. Table 3 presents a summary of the patterns observed across the studies.

**Table 4. Cross-Study Structural Patterns in AI–Cyber Public Relations Research**

Analysis Dimension	Dominant Pattern	Remaining Weaknesses	Theoretical Implications
Type of AI	Chatbot dominance	Limited generative AI exploration	Relational focus remains at an early stage
Outcome	Short-term engagement	Limited long-term trust evidence	Longitudinal gap
Methodology	Survey and conceptual studies	Limited experimental designs	Causal evidence remains weak
Level of Analysis	Organizational focus	Limited multi-stakeholder perspective	Need for ecosystem approach
Risk Focus	Issue monitoring	Limited AI governance attention	Ethical blind spot

Based on Table 4 above, it can be explained that research on Artificial Intelligence in cyber public relations is predominantly focused on chatbot-based applications and short-term

engagement outcomes. The dominant methodological approach remains survey-based and conceptual, with limited use of experimental or longitudinal designs.

Several persistent gaps are also identified, including limited exploration of generative AI, insufficient empirical evidence on long-term trust development, and a strong organization-centric perspective that does not fully capture multi-stakeholder dynamics. Additionally, the relatively low emphasis on AI governance highlights a critical blind spot in the literature, particularly in relation to transparency, accountability, and ethical communication practices. Overall, these patterns indicate that the field remains in an early stage of theoretical consolidation and requires more integrative and longitudinal approaches to advance its conceptual development.

The cross-dimensional synthesis indicates that AI research in cyber public relations is predominantly focused on optimizing chatbot interactions and studying perceptual adoption. Explorations of generative AI, especially in automated content creation and crisis management, are still rather constrained. This pattern indicates that the literature has not yet adequately aligned with the swift advancement of generative AI technologies.

The prevalence of short-term engagement outcomes suggests a temporal bias in the current research literature. The literature is quite comprehensive in elucidating the early reactions of the public to AI systems, although it is deficient in exploring the gradual development of trust over time. This enduring disparity signifies one of the most persistent deficiencies in the domain.

Moreover, the dominant organization-centric perspective indicates that the intricacies of cyber public relations as a multi-actor ecosystem have not been entirely addressed. The insufficient focus on AI governance, particularly on openness, accountability, and disclosure, indicates a significant normative oversight that is becoming increasingly critical as communication automation expands.

### **Critical Discussion: Paradigmatic Tensions in the Literature**

The critical synthesis indicates a techno-optimistic bias in the examined literature. Numerous research highlight AI's capacity to improve engagement via automated reaction; yet, comparable empirical examination of long-term trust is scarce. The premise that communication automation inherently enhances public relations deserves further rigorous examination.

This prejudice is problematic from an epistemic perspective since trust is a construct that develops cumulatively and is highly sensitive to the ethical beliefs of the public. Short-term increases in involvement do not inherently lead to long-term relational legitimacy without the proper integration of transparency and accountability features.

Methodological limitations further restrict the robustness of current inferences. Survey-based approaches predominantly offer substantial insights regarding perception but are less effective in capturing the evolving relational dynamics. The lack of longitudinal and experimental investigations represents a considerable epistemic obstacle to the advancement of the field.

The most significant oversight arises in the realm of AI governance. The literature progresses slowly in establishing practical frameworks for algorithmic transparency and the responsibility of automated communication. This gap suggests that the sector is still evolving from a paradigm of AI for efficiency to one focused on accountable relationship management.

The comprehensive SLR findings indicate that the function of AI in cyber public relations is evolving from an operational instrument to a relational framework; yet, this transformation remains inadequately understood in the existing literature. Many studies just

establish that AI effectively improves interaction but fail to consistently demonstrate how AI alters the structure of organization public connections in the long term.

This gap is a significant contribution of the current systematic review. The study illustrates that the impact of AI on engagement and trust is indirect, influenced by organizational preparation, interface design, and communication governance, as revealed by the synthesis of cross-study patterns. These findings contest the technical determinism that is implicitly present in segments of the early cyber public relations literature.

Furthermore, the insufficient focus on governance aspects within the examined corpus indicates a conceptual oversight that future research must promptly rectify. In a progressively data-driven communication landscape, issues of algorithmic transparency, accountability of automated systems, and the ethics of AI-mediated interactions will become increasingly paramount. The transition to an AI-mediated strategic communication framework is both an analytical need and a normative imperative for the progression of the public relations field.

### **Research Agenda and Strategic Implications**

The consolidation of the field necessitates fortification along several key directions, including longitudinal assessments of public trust, a more profound investigation of generative AI in crisis situations, and the establishment of more effective AI governance frameworks.

The strategic ramifications of these findings emphasize that enterprises can no longer regard AI solely as a means for enhancing communication efficiency. The strategic significance of AI in cyber public relations essentially relies on the amalgamation of technological proficiency, organizational preparedness, and ethically principled communication governance.

This study's literature synthesis indicates that the advancement of Artificial Intelligence (AI) in cyber public relations is predominantly focused on micro-interaction capabilities, especially via chatbots and conversational AI systems. The preeminence of academic interest in social presence, anthropomorphism, and system responsiveness suggests that scholarly emphasis remains on enhancing short-term communication experiences. Although these contributions serve as a crucial basis, an excessive focus on interaction performance may limit a comprehensive grasp of AI's structural implications for organization-public relationship management.

This inclination signifies a developmental stage of the field that predominantly resides within the phase of operational adaptation. The current literature has effectively illustrated AI's ability to improve communication efficiency and perceived relational intimacy. Nonetheless, evidence about the enduring transformation of public connections by AI remains scarce and disjointed. A conceptual gap remains between AI-driven interaction optimization and the development of strategic frameworks that can elucidate its long-term impacts on engagement and trust.

The discussion around AI adoption readiness at the organizational level is broadening, however it remains mostly focused on efficiency improvements, service automation, and decision-support capabilities. This perspective demonstrates a continual instrumentalist bias in the online public relations literature. AI-driven communication transformation transcends mere productivity enhancement, aiming to reconstruct the relational framework between enterprises and their stakeholders. This constraint signifies that the amalgamation of technology viewpoints and relationship management theories necessitates further systematic development.

The synthesis findings indicate that the application of AI in problem and reputation management is increasingly gaining momentum, especially through machine learning-based analytics and social listening functionalities. Nonetheless, the majority of studies are limited to detection and monitoring activities and have not thoroughly investigated how AI systems might facilitate the adaptive orchestration of relationship responses. This tendency suggests that AI in

cyber public relations is progressing from operational enhancement to a more extensive capacity for strategic transformation.

The increasing dialogue regarding professional competences and AI literacy underscores the notion that the evolution of cyber public relations cannot be perceived merely as a technology concern. Organizational socio-technical readiness, practitioners' analytical capabilities, and human-machine interaction are essential factors for successful AI implementation. Nevertheless, the current literature often addresses these skill characteristics independently from relational outcomes, thereby failing to establish a comprehensive conceptual framework.

### **Theoretical Contribution**

This study provides a more definitive conceptual reorientation of AI's function in cyber public relations. This study's findings indicate that, contrary to the predominant view in earlier research that portrays AI only as a tool for improving communication efficiency, AI should be regarded as a complex, mediating relational infrastructure. This viewpoint redirects the analytical emphasis from the efficacy of AI to the manner in which AI alters the dynamics of organization-public relationships within the digital communication landscape.

The study theoretically repositions Artificial Intelligence in cyber public relations from a simple communication automation tool to a layered and contextually embedded AI-mediated strategic relationship management framework. In contrast to previous scholarship that assumes a direct correlation between AI adoption and enhanced engagement, the current synthesis reveals that AI's impact on relational quality is indirect and mediated by strategic organizational transformation, especially via relational engineering and AI governance.

The second contribution is the amalgamation of dialogic public relations ideas with algorithmic communication methodologies. This work positions AI as relational infrastructure, so extending relationship management theory into more automated and data-driven digital communication contexts. This method facilitates the connection between the literature on computer-mediated communication and current practices in cyber public relations.

The paper identifies AI governance as an under-theorized yet essential aspect in elucidating the legitimacy of corporate communication in the era of artificial intelligence. By establishing governance as a fundamental element of the integrative model, the study promotes a transition in focus from technological efficiency to relational responsibility and algorithmic transparency, which are essential for public trust.

The proposed conceptual framework synthesizes previously fragmented data and establishes a more systematic theoretical foundation for future study on the interplay among AI, organizations, and publics within a complex cyber public relations environment.

### **Conclusion**

This systematic literature review demonstrates that the development of Artificial Intelligence (AI) in cyber public relations has progressed rapidly, yet the advancement of theoretical understanding has not kept pace with technological innovation. Existing studies predominantly focus on AI adoption, automation, personalization, and communication efficiency, particularly through chatbots, conversational agents, and generative AI applications. While these technologies have significantly enhanced organizational communication capabilities, the relational mechanisms through which AI influences trust, stakeholder engagement, legitimacy, and long-term organization–public relationships remain insufficiently explored. The findings suggest that AI should not be understood merely as a technological tool for optimizing communication performance but as a relational infrastructure that increasingly shapes interactions between organizations and publics within digitally mediated environments.

The review contributes theoretically by extending relationship management theory into the context of algorithmically mediated communication. The synthesis reveals that the effectiveness of AI in cyber public relations is not determined solely by technological sophistication but also by the interaction between technological capability, organizational readiness, and communication governance. Based on these findings, this study proposes a conceptual shift from technology-centric approaches toward a relational and governance-oriented perspective. Such a perspective provides a more comprehensive understanding of how AI shapes trust, engagement, legitimacy, and relationship quality, thereby offering a stronger theoretical foundation for future cyber public relations research.

From a practical and policy perspective, the findings highlight the growing need for governance frameworks that guide the responsible deployment of AI in organizational communication. Public relations practitioners, professional associations, technology developers, and regulatory institutions should collaborate to establish standards that promote transparency, accountability, ethical AI use, and stakeholder protection. These governance mechanisms are increasingly important in addressing challenges related to algorithmic bias, misinformation, opaque decision-making processes, and declining public trust in digital communication environments. Consequently, AI implementation in public relations should be accompanied by clear ethical guidelines and governance structures to ensure that technological innovation remains aligned with the principles of responsible communication.

Future research should move beyond descriptive investigations of AI adoption and explore the long-term relational consequences of AI-mediated communication. Longitudinal, comparative, and mixed-method studies are particularly needed to examine how AI influences trust formation, relationship quality, stakeholder engagement, and organizational legitimacy over time. In addition, future studies should empirically validate the AI-mediated strategic relationship management framework proposed in this review across different organizational, cultural, and technological contexts. Further research should also investigate the implications of emerging generative AI systems, algorithmic governance, and autonomous communication technologies for the future development of cyber public relations theory and practice.

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