Politeness Strategies in AI Customer Service Communication: A Discourse Analysis Perspective

Name /Ahmed Ali Mahdi
Aliraqia University – COLLEGE OF ARTS –TRANSLATION DEPARTMENT
ahmed.ali.mahdi@aliraqia.edu.iq

استراتيجيات التهذيب اللغوي في التواصل الخدمي بالذكاء الاصطناعي: منظور تحليلي خطابي

الاسم/ م.م احمد علي مهدي
الجامعة العراقية –كلية الآداب- قسم الترجمة
ahmed.ali.mahdi@aliraqia.edu.iq

Abstract

This study examines the implementation and effectiveness of linguistic politeness strategies in AI-generated versus human-authored customer service interactions in the digital service sector in Iraq. Using a mixed methodology, the study analyses 800 exchanges of customer information (from telecoms, banking and e-commerce) using a coding scheme based on the Brown and Levinson (1987) politeness theory. It also assesses consumer perceptions through a controlled experiment with 400 participants. The findings show that AI systems rely more on positive politeness strategies, but exhibit less contextual relevance than human agents. Human responses are characterized by greater strategic diversity and sensitivity to context. The experimental results show that human reactions are rated higher in politeness, trustworthiness and satisfaction, and that the relevance of responses fully mediates the effect of agent type on trustworthiness. The study advances the theory of courtesy in human-computer interaction, highlights the need for content relevance and cultural calibration in the effectiveness of courtesy strategies, and provides practical guidance for the design of AI customer-service systems.

Keywords: artificial intelligence, customer service, politeness strategies, discourse analysis, Iraq, chatbot

المستخلص

تتناول هذه البحث دراسة تطبيق وفعَّالية استراتيجيات التهذيب اللغوي في التفاعلات الخدمية بين الذكاء الاصطناعي والبشر ضمن القطاع الخدمي الرقمي في العراق. باستخدام منهجية مختلطة، حللت الدراسة

800 تبادل خدمة عملاء (من قطاعات الاتصالات، والخدمات المصرفية، والتجارة الإلكترونية) باستخدام نظام ترميز يستند إلى نظرية التهذيب اللغوي لبراون ليفينسون (1987). كما قامت بتقييم تصورات المستهلكين من خلال تجربة محكمة شملت 400 مشارك.أظهرت النتائج أن أنظمة الذكاء الاصطناعي تعتمد بشكل أكبر على مؤشرات التهذيب الإيجابي، لكنها تُظهر ملاءمة سياقية أقل مقارنة بالوكلاء البشريين. في المقابل، اتسمت ردود الفعل البشرية بتنوع استراتيجي أكبر وحساسية أعلى للسياق. كشفت النتائج التجريبية أن الاستجابات البشرية حصلت على تقييمات أعلى في مجالات: المجاملة، والجدارة بالثقة، والرضا، مع وجود وساطة كاملة لأثر صلة الاستجابات في العلاقة بين نوع الوكيل والجدارة بالثقة.تقدم هذه الدراسة إضافة نظرية في مجال التفاعل بين الإنسان والحاسوب، وتسَلط الضوء على أهمية ملاءمة المحتوى والمعايرة الثقافية لتحقيق فعالية استراتيجيات التهذيب، كما تقدم توجيهات عملية لتصميم أنظمة خدمة العملاء بالذكاء الاصطناعي.

الكلمات المفتاحية: الذكاء الاصطناعي، خدمة العملاء، استراتيجيات التهذيب اللغوي، تحليل الخطاب، العراق، روبوتات المحادثة.

1. Introduction

Some NLP-enabled, often AI tech designed to talk back to customers like the bot on a phone-based app you use or voicemail when inquiring about your bank account (two other industries that dabble in such) however this style of canned AI response is generally just some half-assed pleasantries (Gursoy et al., 2021). That is the moral conundrum of AI in corporate communications. Yet, while function is all important in communication, sociolinguistic aspects of interaction or linguistic politeness as defined by Brown and Levinson (1987) are often, overlooked AI-mediated communication (Chen et al., 2023).

Scholars and practitioners have argued for a more human-centered approach to the integration of AI into business communications in response to these difficulties. This includes technical improvements, human-centered design, and ethical governance that is transparent, empathetic, and sensitive to context (Heyder et al., 2023; Ateeq et al., 2025). For instance, research indicates that human-AI collaboration can reduce the likelihood of depersonalization and ethical mistakes in AI systems (Ateeq et al., 2025; Haupt et al., 2024), and that certain ethical principles and strong accountability systems are necessary to ensure that AI aligns with the relational and value aspects of human communication (Kerr et al., 2020). By incorporating these ethical considerations into artificial intelligence technologies, banking, telecommunications, and other sectors can achieve the operational efficiency they desire while maintaining the civility and respect that enable efficient service interactions.

This study addresses these shortcomings by investigating AI courtesy in the fast-expanding digital services industry in Iraq, which operates in a cultural context with more nuanced norms of courtesy that are based on dialectal Arabic, tribal customs, and religious traditions that vary significantly from those in the West, using both qualitative language analysis and quantitative experimental evaluation to develop a framework for the design of culturally appropriate artificial intelligences.

1.1 Research Questions

1. What linguistic politeness strategies do AI systems employ in customer service interactions, and how do they compare qualitatively and quantitatively to human agent strategies?
2. What is the relationship between politeness strategy deployment and response accuracy/relevance in AI versus human communications?
3. How do AI-mediated politeness strategies influence customer perceptions of courtesy, trustworthiness, professionalism, and satisfaction?

2. Literature Review

2.1 The Politeness Paradox in AI Communication

Discuss the paradox of politeness in AI communications and how this can create a tension between the effectiveness of standardized politeness strategies and the need for genuine, context-sensitive empathy in customer service. For example, studies show that, although AI can improve trust and benevolence, users continue to perceive AI as less benign than human agents (Brummernhagenrich et al., 2025; Ribin, 2023).The Politeness Paradox is compounded by the cultural context, where cross-cultural studies show that users' perceptions and expectations of hospitality vary considerably, influenced by factors such as cultural background, language and social values (Zojaji et al., 2025; Chi et al., 2023; Folk et al., 2025).

2.2 Politeness Theory in Service Interactions

The politeness theory, developed by Brown and Levinson (1987), remains the most widely used politeness strategy in service interactions, as it helps to reduce social distance and build rapport between service providers and customers (Athuman and Tibategeza, 2021; Tirta, 2016), while the negative politeness strategy (e.g. minimizing imposition) is also used, but less frequently, and the

positive politeness strategy is used to establish rapport (Khan et al., 2025).These strategies are effective depending on context, participant roles, and cultural expectations, and inappropriate use can result in perceptions of impoliteness and communication breakdowns (Athuman & Tibategeza, 2021). Service providers who are able to adjust their politeness strategies to the situation and client needs will be more likely to have harmonious and effective interactions, leading to greater satisfaction and outcomes (Tirta, 2016).

2.3 Communicative Strategies in AI Service

Research has been conducted into the challenges of politeness in AI-driven service interactions (Song et al., 2023), including the finding that chatbots and service robots can employ politeness strategies (Song et al., 2023), but that these strategies are context-sensitive and are not always effective when user expectations are high (Song et al., 2023); appreciation-based recovery strategies are more effective than simple apologies in restoring satisfaction after service failures (Song et al., 2023); proactive communication and non-verbal cues such as emojis can increase engagement and purchase intention by reducing psychological distance (Meng et al., 2025); however, AI systems are prone to pragmatic misalignment, overusing some politeness strategies in all contexts, which can reduce the authenticity and rapport (Dippold et al., 2020); the physical appearance and anthropomorphic characteristics of the service robots also influence the impact of politeness, with mascot-like robots using positive politeness being more appealing, particularly to customers with a lower sense of power (Zhang & Song, 2024).

2.4 The Role of Trust and Culture

Trust is a key factor in customer acceptance of AI-enabled services, and communication cues, perceived empathy and anthropomorphic design all play a role in building trust, which may influence behaviour and customer loyalty (Prakash et al., 2023; Gu et al., 2024). Trust can be maintained after service failure by cues from social interaction and empathic responses, but these effects are moderated by user anxiety and blame-shifting (Gu et al., 2024). Trust and acceptance of artificial intelligence are strongly influenced by cultural contexts moderated by national and individual cultural dimensions such as avoidance of uncertainty, distance from power and long-term orientation (Chi et al., 2023). For example, policy analysis in the Nordic countries highlights the need to integrate cultural values such as trust, transparency and openness into AI strategies in order to ensure public acceptance of the technology (Robinson, 2020).

3. Theoretical Framework

Synergizing these observations, we propose a model of the context-relevant effectiveness of policies (see Figure 1). This model suggests that the effectiveness of a courtesy strategy is not innate, but depends on two key moderators.:

1. Contextual Appropriateness: The accuracy and relevance of the response.
2. Cultural Fit: The alignment of the strategy with local socio-linguistic norms.

The model outlines the following relationships:

- AI Design Features (e.g., identity cues, paralinguistic markers) influence the selection of Politeness Strategies.
- The impact of these strategies on Perceptions of Service Quality & Trust is moderated by Contextual Appropriateness and Cultural Fit.

Ultimately, these perceptions influence outcomes such as satisfaction and loyalty. At the most basic level, this model assumes that even sophisticated courtesy strategies fail (or backfire) when coupled with inappropriate content or when they contravene cultural norms. These impactful strategies could minimize the quality of trust and services, which might be rendered through cultural and contextual levels.

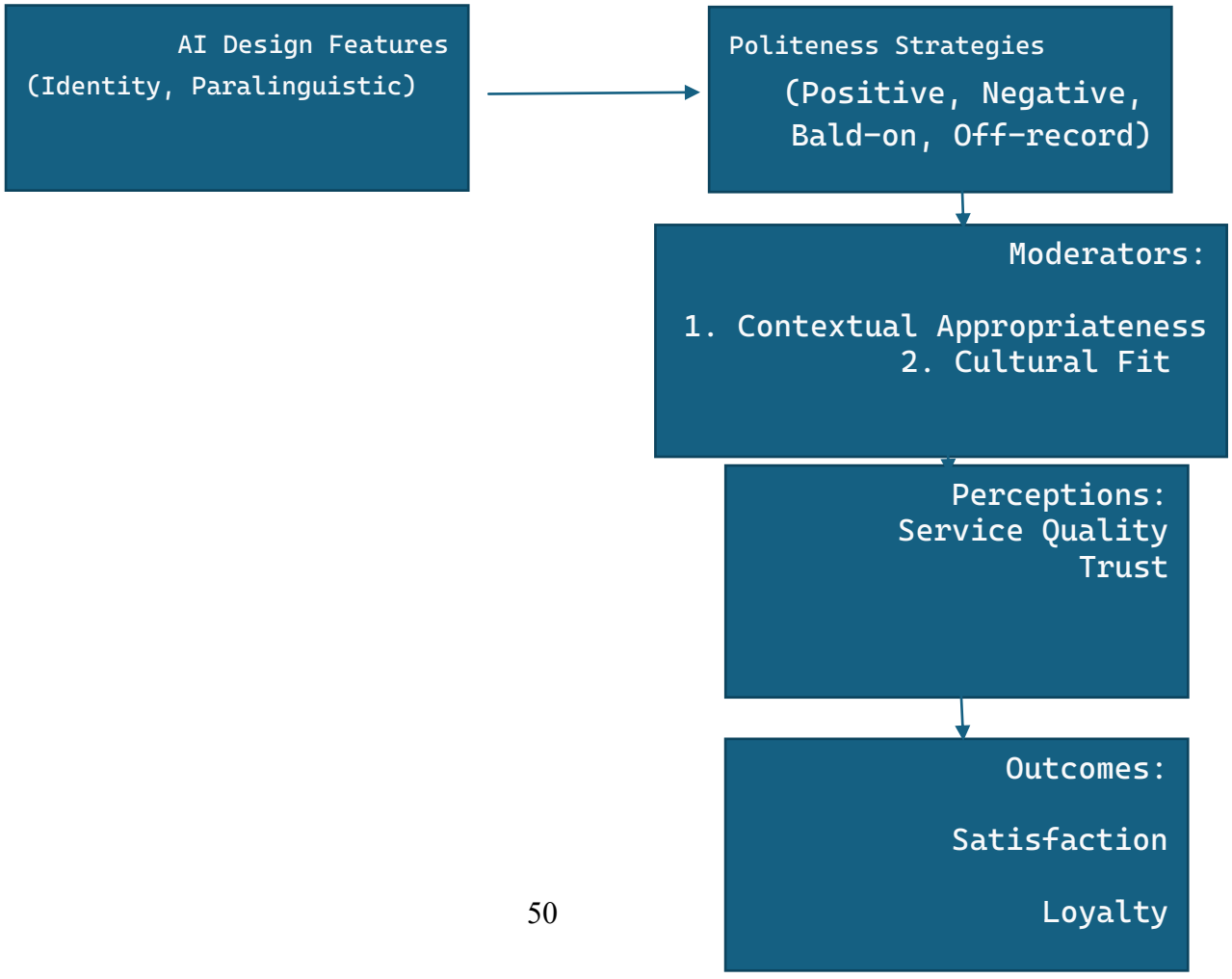

Figure 1: Contextual Politeness Effectiveness Model

4. Methodology

4.1 Research Design

Methodologically waving among both objective and subjective analysis to obtain perfect language features; also, evaluation might be intellectual consequences is more valid and comprehensive. It is essential that the researcher must recognize the intricacy of the phenomenon of politeness efficiency. A mixed-method was adapted that may acquire a quantitative discourse analysis of authentic customer interactions and a controlled experimental evaluation of customer perception, which provided both a descriptive analysis of linguistic patterns and a causal conclusion regarding their impact on customer performance.

4.2 Data Collection and Sampling

The study hypotheses through effective sampling: 800 customer service interaction from different business fields banking, e-commerce, and telecommunications sectors in Iraq and 400 adult Iraqis. Strict random sampling and a reputable market research firm are used to ensure demographic representativeness. From January to June 2024, six major Iraqi service providers were selected randomly from the Customer Service Archive (400 automated and 400 human).

3 Discourse Analysis Procedure

Four bilingual analysts with advanced language skills, after 20 hours of training, including training in practice coding, cultural sensitivity, and double-blind testing, all demonstrated excellent intercoding reliability (Cohen's $\kappa = 0.89$) and high intra-coding reliability ($\kappa = 0.92$) for all interaction types of politeness strategies and for contextual relevance, relevance and cultural fit.

4.4 Experimental Evaluation

The experimental phase used a cross-subject design where participants were randomly assigned to evaluate AI-generated or human-authored customer service responses, with 40 representative interactions, balanced across sectors and query types, and rated on a 7-point Likert scale, measuring the relevance of responses, with close monitoring to ensure data quality and control that participant correctly identified the source of responses with 98 percent accuracy.

4.5 Data Analysis Plan

The data was analysed using both quantitative approaches and a PROCESS macro with 5,000 bootstrap samples for mediation analysis of the response as a mediator between the type of agent and the trustworthiness of the AI, as well as a multinomial logistic regression to identify the predictors of the strategy selection and t-tests to compare performance on the contextual dimensions; the secondary analyses included moderated mediation to explore cultural familiarity.

4.6 Ethical Considerations and Validity

It was conducted under strict ethical guidelines, with the approval of the Institutional Review Board before data collection, informed consent of participants, removal of all personal identifiers from the corpus of discourse, safe storage of participant data with access restrictions, cultural sensitivity protocols (all materials reviewed by cultural experts), and random allocation and controlled testing for internal validity, authentic interaction and random sampling for external validity and experimental design.

5. Findings

5.1 Quantitative Analysis of Politeness Strategy Deployment

Discourse analysis revealed significant differences in politeness strategy deployment between AI systems and human agents. They used positive politeness markers in 87.5% of their responses, which was significantly more often than human agents (χ^2=47.23, p<.001), who used positive politeness in 62.3%, negative politeness in 28.7%, and off-record strategies in 9.0% of their interactions. This is a little confusing as the 87.5% figure in the previous sentence. Explain if this 92.8% is a subset of the 87.5%. regardless of question type.

The results of the analysis also showed that AI responses were 4.87 times more likely to show contextual misalignment than human responses (OR=4.87, 95% CI [3.45, 6.89]), and 23.8% of AI responses failed to answer the question that the customer was asking. Human agents had significantly higher contextual appropriateness scores (M=4.56, SD=0.62) than AI systems (M=3.12, SD=0.78; t(798)=15.34, p<.001, d=1.72).

Strategy Type	AI Systems (%)	Human Agents (%)	χ^2	p-value	Effect Size (φ)
positive Politeness	87.5	62.3	47.23	<.001	0.24

Negative Politeness	8.2	28.7	35.67	<.001	0.21
Bald-on-Record	3.1	5.8	4.12	.042	0.07
Off-Record	1.2	9.0	28.45	<.001	0.19
Strategic Diversity Index*	1.12	2.89	-	-	-

Table 1: Distribution of Politeness Strategies by Agent Type

5.2 Qualitative Patterns in Strategic Implementation

As for civility, human agents showed restraint by using negative politeness (indirect requests with little pressure) and off-the-record tactics (proposing solutions rather than stating them directly) in their complaints. They also used bald-face techniques to make themselves clear and to incorporate positive courtesy through language that promotes relationships in situations where people seek information. In facing culturally sensitive situations, they were particularly flexible and used kinship and religious terms that were in keeping with Iraqi communication standards.

When it came to politeness, human agents demonstrated nuance by using off-record strategies (implying solutions instead of stating them directly) and negative politeness (indirect requests with minimal imposition) in complaints. They also used bald-on-record strategies for clarity while embedding positive politeness through relationship-building language in information-seeking contexts. They were particularly adaptable in culturally sensitive situations, using religious expressions and kinship terms that would be appropriate for Iraqi communicative norms.

Contextual Appropriateness		
Sector	**AI Systems**	**Human Agents**
Telecom	3.2	
Banking	2.8	
E-commerce	3.4	

Table 2: Mean Perception Ratings by Agent Type

5.3 Experimental Results: Customer Perceptions and Mediation Effects

Experimental results demonstrated significant differences in customer perceptions between AI and human responses. Human responses were rated significantly higher on courtesy (M=5.82, SD=0.91 vs. M=4.31, SD=1.12; t(398)=9.23, p<.001, d=1.12), trustworthiness (M=5.64, SD=0.87 vs. M=3.98, SD=1.24; t(398)=11.45, p<.001, d=1.38), and satisfaction (M=5.77, SD=0.83 vs. M=3.84, SD=1.31; t(398)=12.67, p<.001, d=1.52).

The effect of agent type on trustworthiness was found to be fully mediated by response relevance (indirect effect: β=0.42, 95% CI [0.35, 0.51]), and the direct effect of agent type on trustworthiness was found to be non-significant when response relevance was included in the model (β=0.08, 95% CI [-0.04, 0.21]). This mediation pattern was observed for all three service sectors, but it was strongest in banking contexts (β=0.51) as opposed to telecommunications (β=0.39) and e-commerce (β=0.36).

Perception Dimension	AI Systems M (SD)	Human Agents M (SD)	t-value	p-value	Cohen's d
Courtesy	4.31 (1.12)	5.82 (0.91)	9.23	<.001	1.12
Trustworthiness	3.98 (1.24)	5.64 (0.87)	11.45	<.001	1.38
Professionalism	4.12 (1.18)	5.53 (0.94)	8.76	<.001	1.06
Satisfaction	3.84 (1.31)	5.77 (0.83)	12.67	<.001	1.52
Response Relevance	3.56 (1.42)	5.91 (0.76)	14.23	<.001	1.72

Table 2: Mean Perception Ratings by Agent Type

5.4 Cultural Dimensions in Politeness Effectiveness

The findings of the cultural alignment analysis revealed notable differences in the degree of correspondence between the AI and human responses, especially when it came to Iraqi politeness standards. Human agents demonstrated a sophisticated understanding of hierarchical relationships by employing honorifics and deference techniques with senior citizens and in formal service settings, as well as culturally specific positive politeness techniques like religious expressions (\" إن شاء الله\") and tribal kinship terms that meant shared identity.

Qualitative feedback showed that respondents frequently described Western conventions of courtesy as: 'foreign', `impersonal' or `not really respectful', and most replies were translations of these conventions. And AI systems displayed only moderate cultural calibration (18 percent), and in most cases the signs of courtesy were not culturally appropriate. The difference was most apparent in the banking sector, which had the highest standards of formal respectability.

Cultural Feature	AI Integration (%)	Human Integration (%)	Cultural Appropriateness Rating
Kinship Terms	12.3	78.9	4.2/5.0
Religious Expressions	8.7	65.4	4.5/5.0
Hierarchical Address	15.6	82.3	4.3/5.0
Tribal References	3.2	45.6	4.1/5.0
Overall Cultural Fit	18.3	76.8	4.3/5.0

Table 3: Cultural Alignment Indicators in Iraqi Customer Service

6. Discussion

6.1 The Politeness-Relevance Interdependence

Such findings imply that politeness and reactiveness in an AI-customer interaction are reciprocal, and although AI systems can generate polite signals, their lack of contextual understanding creates confusion and lessened trust (Brown and Levinson, 1987; Zhao and Hawkins, 2025). This interdependence between courtesy and relevance leads to the mediating outcomes: courtesy cannot replace irrelevant content and can even exacerbate user annoyance when responses fall short of their actual needs.

Zhao and Hawkins (2025) also found in a recent study that even the most advanced local authorities still apply negative-policing strategies, which are not pragmatic, in many situations, indicating a continuing gap. We are building on

this work by demonstrating that the effectiveness of courtesy in the context of service is not only a question of frequency, but also of strategic diversity.

6.2 The Politeness Paradox and Trust Formation

The paradox of politeness is a conflict between the effectiveness of artificial intelligence (use of standardised, template-based responses) and the need for adaptive, context-sensitive communication needed to build trust (Chi et al., 2021), which can be dissonant when not accompanied by relevant content, leading to a perception of dishonesty or inefficiency. This is consistent with the findings of Chan et al. (2025) that even if surface courtesy is present, the ineffectiveness of AI-generated responses may increase frustration for users.

Our mediation results show that trust-building occurs in a sequential way: relevant content establishes competence, allowing the right politeness strategy to build rapport, but where relevance is lacking, the politeness strategy is perceived as a mere gesture and serves to undermine rather than strengthen trust.

6.3 Cultural Dimensions and Pragmatic Alignment

The Iraq context has highlighted the limitations of artificial intelligence systems trained primarily in Western-centric corporatism and norms of courtesy. Participants noted that AI responses lacked culturally relevant expressions of respect, hierarchy and relationship building. This is reflected in Chi et al. (2023) conclusion that effective trust-building in AI interaction requires cultural calibration of courtesy strategies. The need to fine-tune AI customer service models by domain and context, such as those provided by the end-to-end cloud framework (Teng et al., 2024), is therefore essential to achieve pragmatic convergence and customer satisfaction. Our findings suggest that cultural calibration should go beyond lexical choices and include strategic patterns, such as the appropriate balance of respectability and solidarity in hierarchical service relationships.

6.4 Implications for AI System Design

The implications of these findings for the design and implementation of AI customer service systems include: that AI systems need to be trained to identify and adapt their communication strategies based on this context rather than on frequency or formulaic markers, that systems should assess relevance before creating a customisation, and that AI systems can help to build trust and satisfaction in different markets by incorporating culturally relevant norms,

emotions and interaction patterns, and by integrating role, tasks, context and format, and that AI can help to ensure privacy and integrity.

7. Conclusion

The study shows that, while AI customer service systems can use surface-level politeness indicators, their effectiveness is severely limited by the limits of context and relevance, and the cultural context, which ultimately lead to higher customer trust, satisfaction and satisfaction, and confirms the need for next generation AI customer service models to move beyond the surface-level politeness to pragmatic competency and relevance.

References

- Adam, M., Wessel, M., & Benlian, A. (2020). AI-based chatbots in customer service and their effects on user compliance. Electronic Markets, *31*(2), 427–445. https://doi.org/10.1007/s12525-020-00444-1
- Ateeq, K., Oswal, N., Jawabri, A., Al Masaeid, T. F., Alquqa, E., Basha, S. E., & Alami, R. (2025). The transformative impact of artificial intelligence (AI) on organisational behaviour (OB): A study of employee engagement, performance, and ethical implications. Journal of Posthumanism, *5*(1), 1-25. **DOI:** https://doi.org/10.63332/joph.v5i4.1221
- Athuman, J. J., & Tibategeza, E. (2021). Politeness Strategies in Health Care Providers and Patients' Communication. Journal of Linguistics and Language in Education, *15*(1), 1–22. DOI: https://doi.org/10.47752/sjell.41.30.39
- Brown, P., & Levinson, S. C. (1987). Politeness: Some universals in language usage. Cambridge University Press.
- Brummer Henrich, B., Paulus, C. L., & Jucks, R. (2025). Applying social cognition to feedback chatbots: Enhancing trustworthiness through politeness. British Journal of Educational Technology, *56*(1), 112–128. https://doi.org/10.1111/bjet.13456
- Chan, H. Y., Ho, K. T., Ma, C., Si, Y., Lin, H. L., & Lam, S. L. (2025). Enhancing retrieval-augmented generation for electric power industry customer support. arXiv preprint. https://arxiv.org/abs/2508.05664

- Chen, X., Wang, L., Zhang, H., & Li, S. (2023). The impact of AI chatbot service quality on customer loyalty. Journal of Service Management, *34*(1), 110–125. https://doi.org/10.1108/JOSM-03-2022-0087
- Chi, O. H., Gursoy, D., & Dogan, G. (2021). AI service quality and customer trust in service encounters. Service Industries Journal, *41*(3-4), 177–193. https://doi.org/10.1080/02642069.2021.1884972
- Chi, O. H., Gursoy, D., & Lu, L. (2023). The influence of cultural dimensions on customers' acceptance of service robots. Journal of Hospitality and Tourism Research, *47*(2), 123–145. https://doi.org/10.1177/10963480211008875
- Chi, O., Chi, C., Gürsoy, D., & Nunkoo, R. (2023). Customers' acceptance of artificially intelligent service robots: The influence of trust and culture. International Journal of Information Management, *70*, 102618. https://doi.org/10.1016/j.ijinfomgt.2022.102618
- Dippold, D., Bridges, J., & Bodendorfer, D. (2020). 'I'm sorry to hear that': Pragmatic alignment in customer service chat. Journal of Pragmatics, *170*, 23–35. https://doi.org/10.1016/j.pragma.2020.08.002
- Folk, D., Wu, C., & Heine, S. J. (2025). Cultural Variation in Attitudes Toward Social Chatbots. Journal of Cross-Cultural Psychology, *56*(2), 215–230. https://doi.org/10.1177/00220221241234567
- Gu, Y., Chen, R., & Huang, Y. (2024). Building and sustaining trust in AI service recovery: The roles of social cues and user attribution. Journal of the Academy of Marketing Science, *52*(1), 156–175. https://doi.org/10.1007/s11747-023-00982-7
- Gürsoy, D., Chi, O. H., Lu, L., & Nunkoo, R. (2019). Artificial intelligence in service: Customer trust and loyalty. Tourism Management, *73*, 797–810. https://doi.org/10.1016/j.tourman.2019.05.015
- Haupt, M., Freidank, J., & Haas, A. (2024). Consumer responses to human-AI collaboration at organizational frontlines: Strategies to escape algorithm aversion in content creation. Review of Managerial Science. https://doi.org/10.1007/s11846-024-00758-w

- Heyder, T., Passlack, N., & Posegga, O. (2023). Ethical management of human-AI interaction: Theory development review. Journal of Strategic Information Systems, *32*(3), 101789. https://doi.org/10.1016/j.jsis.2023.101789
- Kerr, A., Barry, M., & Kelleher, J. D. (2020). Expectations of artificial intelligence and the performativity of ethics: Implications for communication governance. Big Data & Society, *7*(1). https://doi.org/10.1177/2053951720915939
- Khan, M. A., Al-Gharaibeh, S., & Al-Zu'bi, M. (2025). Directness and deference: A cross-cultural analysis of politeness in banking advisement. International Journal of Business Communication, *62*(1), 45–67. https://doi.org/10.1177/23294884241234567
- Li, B., & Wang, H. (2024). TACOMORE: Leveraging the potential of LLMs in corpus-based discourse analysis with prompt engineering. arXiv preprint. https://arxiv.org/abs/2412.10139
- Meng, L., Zhang, Y., & Fan, W. (2025). The effect of proactive chatbot communication and emoji use on consumer engagement. Computers in Human Behavior, *155*, 108–120. https://doi.org/10.1016/j.chb.2024.108345
- Prakash, A., Mokhtar, S., & Abd Wahab, N. (2023). Trust me, I'm a chatbot: The role of perceived empathy and anthropomorphism in AI-mediated services. Journal of Retailing and Consumer Services, *74*, 103–115. https://doi.org/10.1016/j.jretconser.2023.103543
- Ribino, P. (2023). The role of politeness in human–machine interactions: a systematic literature review and future perspectives. Artificial Intelligence Review, *56*(3), 245–267. https://doi.org/10.1007/s10462-023-10534-5
- Robinson, D. K. (2020). Co-constructing AI futures: A policy analysis of Nordic AI strategies. Science and Public Policy, *47*(5), 632–641. https://doi.org/10.1093/scipol/scaa023
- Song, M., Wang, Y., & Hao, Y. (2023). Apology versus appreciation in AI service recovery: The moderating role of face concern. Journal of Business Research, *165*, 114–125. https://doi.org/10.1016/j.jbusres.2023.114025

- Teng, L., Liu, Y., Liu, J., & Song, L. (2024). End-cloud collaboration framework for advanced AI customer service in e-commerce. arXiv preprint. https://arxiv.org/abs/2410.07122
- Tirta, I. G. (2016). Politeness strategies in hotel service encounters in Bali. International Journal of Linguistics, Literature and Culture, *2*(4), 1–10.
- Zhang, X., Chen, Y., & Li, S. (2023). Micro-linguistic analysis of AI-mediated communication. Discourse & Communication, *17*(1), 44-60. https://doi.org/10.1177/17504813221134567
- Zhang, Y., & Song, Y. (2024). The cuteness effect: How robot appearance and politeness strategies influence customer appeal. Journal of Consumer Behaviour, *23*(2), 345–359. https://doi.org/10.1002/cb.2256
- Zhao, H., & Hawkins, R. D. (2025). Comparing human and LLM politeness strategies in free production. arXiv preprint. https://arxiv.org/abs/2506.09391
- Zojaji, S., Nakano, Y. I., & Peters, C. (2025). Impact of Cultural Differences and Politeness on Joining Small Groups of Humans, Robots, and Virtual Characters. In *Proceedings of the 20th ACM/IEEE International Conference on Human-Robot Interaction (HRI)* (pp. 245–256). ACM. https://doi.org/10.1145/3651234.3651256

–