CHAPTER 2

Artificial Intelligence and Cross-Cultural Communication: Opportunities and Risks

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ABSTRACT

Cross-cultural communication has been a fundamental aspect of democratic participation and intercultural understanding for a long time. The landscape is changing drastically as humans engage with one another in new ways across cultures thanks to the emergence of Artificial Intelligence (AI) tools, such as neural machine translation, large language models, and recommendation algorithms. AI systems, however, that are mostly trained on English language and global north data can embody structural language biases that marginalize minority and low-resource language communities. In this study, a qualitative systematic literature review of twenty peer-reviewed article sources found from 2015 to 2025 is used to investigate the enabling and threatening aspects of cross-cultural communication with the aid of AI. The same technologies that help to bring about multilingual engagement also threaten cultural homogenization and epistemic erasure. The promotion of multilingual engagement is hypothesized to be the same technologies that are helping to democratize multilingual engagement which also help to risk cultural homogenization and epistemic erasure. The results identified 4 thematic dimensions: AI as a communicative enabler, linguistic bias, cultural homogenization and ethical governance. An inclusive development is proposed to follow a culturally responsive AI five-layer model.

Introduction

Intercultural communications have always played an important role in social organization. The capacity of people with diverse cultures to comprehend each other has shaped the progress of civilization, helped to determine the fate of nations and laid the underpinning for the pluralistic fabric of democratic societies. In diverse, equal and mutually recognize societies, cross-cultural communication is not only a practical need, it is a moral and political obligation as well. Today, there are billions of people in various languages, ethnic groups, and countries who need to communicate with each other through the institutions of government, business, school, and social organization every day. These communicative exchanges have a direct impact on the extent to which all communities can be involved in meaningful ways in public life, enjoy political rights, and help to build a democratic culture together. The importance of cross-cultural communication is not to be underestimated: it is a key component of democratic pluralism, social cohesion, and the fulfillment of human dignity across difference.

Artificial Intelligence (AI) has proven to be one of the most impact factors transforming cross-cultural communication in the twenty-first century. Over the last ten years, AI technologies have moved out of the realm of specialized research labs and are now integral to the daily communicative life of billions of people worldwide. The products of automated translation systems, AI-powered social media algorithms, large language model (LLM) powered catboats, and generative content systems are the systems through which people are negotiating linguistic diversity, accessing information, and communicating across cultural divides. The potential for these technologies to provide information is enormous[1]. Google has built NMT systems that obtain close-to-human performance on a limited set of language pairs, allowing people from Mandarin, Arabic, Swahili and Indonesian to communicate at a scale and speed not previously seen. Large language models (LLMs) like GPT-4 can hold more meaningfully nuanced conversations in more and more languages and cultural registers, enabling the production of multilingual content and helping users with

[1] Wu, Yonghui, Mike, Schuster, Zhifeng, Chen, Quoc V., Le, Mohammad, Norouzi, Wolfgang, Macherey, Maxim, Krikun, Yuan, Cao, Qin, Gao, Klaus, Macherey, Jeff, Klingner, Apurva, Shah, Melvin, Johnson, Xiaobing, Liu, Łukasz, Kaiser, Stephan, Gouws, Yoshikiyo, Kato, Taku, Kudo, Hideto, Kazawa, Keith, Stevens, George, Kurian, Nishant, Patil, Wei, Wang, Cliff, Young, Jason, Smith, Jason, Riesa, Alex, Rudnick, Oriol, Vinyals, Greg, Corrado, Macduff, Hughes, and Jeffrey, Dean. 2016. "Google's Neural Machine Translation System: Bridging the Gap between Human and Machine Translation." arXiv. https://doi.org/10.48550/arXiv.1609.08144

cultural-specific communicative norms. Capability implications of these skills in democratic societies are societies based on the idea of meaningful interaction between citizens across cultural, linguistic and social boundaries.

The bond between AI and cross-cultural communication is highly ambivalent, to say the least. The technologies that can help to break down language and culture barriers also carry important risks, as critical scholarship has now documented. AI systems are not cultural neutrals, they are the result of cultural, economic and political contexts in which they are developed and educated[2]. AI systems trained using data that is overwhelmingly skewed towards the dominant language (usually English), and the cultural biases of the Global North, are likely to inherit the same biases and asymmetries from their training data[3]. Because these tools are used on a global scale, these biases are not just technical inconveniences, but active forces that affect the communicative practices of billions of people, and the ways that culture and community of minorities are represented, participate in civic life, and are defined by, and sustained in, the discourse of democracy[4].

This chapter resides at the crossroads of communication studies, AI Ethics, and democratic theory. It contends that the notion of cross-cultural communication enabled by AI cannot be approached purely from a technical standpoint and must be assessed on democratic and ethical grounds: Does AI promote intercultural understanding? Does it enable all communities, including those who speak low-resource languages, to be at the table equally? Does it maintain cultural pluralism, which is essential to pluralistic democracy? These are not 'side questions' but 'main questions' for those who wish to understand the implications of Artificial Intelligence for the future of democratic

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[2] Bender, Emily M., Timnit, Gebru, Angelina, McMillan-Major, and Shmargaret, Shmitchell. 2021. "On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?" In *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*, 610–623. New York: ACM. https://dl.acm.org/doi/10.1145/3442188.3445922

[3] Joshi, Pratik, Sebastin, Santy, Amar, Budhiraja, Kalika, Bali, and Monojit, Choudhury. 2020. "The State and Fate of Linguistic Diversity and Inclusion in the NLP World." In *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (ACL)*, 6282–6293. https://doi.org/10.48550/arXiv.2004.09095

[4] Bender, Emily M., Timnit, Gebru, Angelina, McMillan-Major, and Shmargaret, Shmitchell. 2021. "On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?" In *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*, 610–623. New York: ACM. https://dl.acm.org/doi/10.1145/3442188.3445922