ADVANCED TECHNOLOGIES, METHODS AND MATERIALS FOR HUMAN HEALTH AND WELL-BEING: A TRANSCULTURAL AND INTERDISCIPLINARY PERSPECTIVE

EDITORIAL INTRODUCTION

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This special issue of *mediAzioni*, titled *Advanced Technologies, Methods and Materials for Human Health and Well-Being: A Transcultural and Interdisciplinary Perspective,* emerges from a shared commitment to exploring the human, cultural, and communicative dimensions of healthcare in an era of technological transformation. It reflects the research and dialogue developed within the Tuscany Health Ecosystem (THE) Project "Advanced Technologies, Methods and Materials for Human Health and Well-Being".[1]

Since 2022, the editors and the majority of the contributors to this volume (S. Ardizzoni, M. Aurora, C. Buffagni, A. Di Toro, I. Jung, K. Kim, D. Salomoni, A. Scibetta, R. Siebetcheu) have been conducting research in THE's Spoke 3, subprojects 3 and 4, which focus respectively on human-centered innovation in health technologies and on communication, mediation, and care practices in

intercultural and interdisciplinary contexts. Other contributors (S. Machetti, S. Maisano) collaborated within Spoke 5, which focuses on technology transfer, dissemination of research results and targeted training for personnel involved in the ecosystem of healthcare.

The current issue brings together perspectives from linguistics, translation and interpreting studies, anthropology, philosophy, ethics, and health communication, aiming to foster an integrated reflection on health as a relational, transcultural, and socially embedded practice. While advanced technologies increasingly mediate interactions between doctors, patients, and caregivers, the human dimension of care, as rooted in language, narrative, and empathy, remains indispensable. This collection thus invites readers to reconsider health and well-being through a transcultural and interdisciplinary lens that bridges scientific, humanistic, and ethical approaches.

The encounter between medicine and the humanities has long been shaped by the recognition that healing involves not only biological processes but also social, psychological, and narrative dimensions. As Arthur Kleinman argued in his seminal work *The Illness Narratives: Suffering, Healing, and the Human Condition* (1988), illness is not simply a disease category but a lived experience, an interpretive act through which individuals make sense of suffering. Building on this anthropological insight, the field of medical humanities and, later, narrative medicine, have foregrounded the centrality of communication and meaning-making in healthcare. Rita Charon's *Narrative Medicine: Honoring the Stories of Illness* (2006) emphasized the value of narrative competence – the capacity to listen to, interpret, and respond to patients' stories – as a core clinical skill. Similarly, Eric Cassell (1991) reminded us that the goal of medicine is not merely to cure disease but to relieve the suffering of individuals who exist within social and cultural worlds.

At the same time, transcultural approaches have highlighted the plurality of conceptions of the body, illness, and care. In contemporary multicultural societies, health communication takes place across linguistic, cultural, and epistemological boundaries. Translators and interpreters in medical settings, referred to as linguistic and cultural mediators (LCMs), play a crucial role in enabling understanding and mutual trust. Cecilia Wadensjö's (1998) pioneering studies on dialogic interpreting revealed how interpreters co-construct meaning within triadic interactions, actively shaping relational and institutional dynamics. In this sense, LCM-work is not a neutral transmission of words but an ethically and emotionally charged practice that involves negotiating power, empathy, and expertise. The research group within the Tuscany Health Ecosystem project, and the contributors to this special issue highlight the agency role of LCM in the triadic communication, and the centrality of the role of human transcoding in the co-construction of effective physician–patient relationships, especially in multicultural settings.

The contributions in this issue build upon these theoretical premises while extending them into new territories shaped by digitalization, migration, and artificial intelligence. They explore how advanced technologies, ranging from telemedicine platforms to socially assistive robots, transform communicative and ethical relationships in healthcare, raising new questions about human agency,

emotional labor, and the cultural framing of care, while also directing attention to ongoing debates on these issues in Asian contexts.

The Tuscany Health Ecosystem: Integrating innovation and humanities

The THE Project represents an interdisciplinary research framework that brings together universities, hospitals, research centers, and regional institutions to promote innovation in healthcare technologies and methods. Initiated in December 2022 and completed in January 2026 the project involves multiple Tuscan universities alongside a wide range of public and private institutions. Within this ecosystem, Spoke 3 (*Advanced Technologies, Methods and Materials for Human Health and Well-Being*), coordinated by the University of Florence, is organized in nineteen subprojects, which develop around three main pillars: the use of core products from leading firms, the improvement of technologies for practical application, and the promotion of innovative technologies across diverse fields. These subprojects, overseen by various university departments and research organizations, examine and integrate modern technologies for human health, including treatments, diagnostics, therapies, rehabilitation, and everyday support. This research spans multiple scientific and technological domains – such as engineering, computer science, physics, biology, and chemistry – closely interconnected with medical and clinical practices. Expertise in the social and human sciences further enhances these competencies. The defining feature of this Spoke is its multidisciplinary orientation, which fosters both developmental and innovative activities.

The editors of this special issue have been directly involved in subprojects 3 and 4, focusing on linguistic and cultural mediation, narrative practices, and ethical issues in technologically mediated healthcare. Their work underscores that innovation cannot be understood solely in technical terms but must also address communicative, cultural, and affective dimensions. By combining empirical research – such as conversation analysis, corpus linguistics, and ethnography – with conceptual reflection, this issue exemplifies the "ecosystemic" approach promoted by THE: a vision of healthcare as a network of human, technological, and institutional actors whose interactions shape both medical outcomes and social meanings.

Main research areas and contributions

The articles collected here are organized around several interrelated axes: linguistic and anthropological perspectives in intercultural practices of mediation, communication, and translation in healthcare settings, examples of cultural variations in healthcare practices, assistive technology and ethical issues in East Asia, declinations of medical humanities, narrative medicine and pedagogy, and art practices in relation to healthcare.

The first section, entitled *Bridging Healthcare: Linguistic and Anthropological Perspectives* examines the crucial role of linguistic and cultural mediators (LCMs)

in ensuring effective and equitable communication in healthcare. Sabrina Ardizzoni's *"Translation and Beyond: Addressing the Emotional Labor and Well-Being of Healthcare Mediators"* explores the often-invisible emotional burden of mediators, combining ethnographic and interdisciplinary methods to reveal how affective and institutional dynamics shape their professional experience. Federica Ceccoli, Laura Gavioli, and Daniele Urlotti's study, *"The Role of Intercultural Mediators in Healthcare Interactions between English-Speaking Patients and Italian Clinicians during Electronic Documentation,"* uses conversation analysis to show how mediators sustain relational continuity when clinicians are absorbed in digital record-keeping. The research illustrates how LCMs occupy the "temporary absence" of the clinicians to create space for empathic communicative activities. The resourcefulness of those involved in clinical dialogues is also illustrated by Simona Maisano in her article *"Multilingual and Multicultural Health Communication: Insights from Medical Anthropology and Linguistics."* Drawing on ethnographic research in third-sector health centers in southern and central Italy, Maisano analyzes how trust, authority, and professional roles are negotiated through language. Through field observations, the researcher shows that the lack of formal interpreting systems, although representing a violation of basic patients' rights, does not result in silence. Instead, it fosters the creation of "improvised ecologies of meaning," constantly negotiated by doctors, patients, and sometimes even by the researcher herself. Raymond Siebetcheu's study, *"The Perception of Disease in Sub-Saharan Africa Managing Linguistic and Cultural Barriers and Mediation Processes among Asylum Seekers,"* offers a transcultural comparison of health beliefs, calling for structural recognition of professional mediators in Italy. Andrea Scibetta and Sabrina Ardizzoni's joint article, *"Attitudes of Chinese-Speaking Patients about Language and Cultural Mediation in Tuscan Healthcare Environments: Findings and Implications from a Survey,"* provide quantitative and qualitative data on patients' perceptions of LCMs, especially focusing on a survey among Chinese-speaking patients in Tuscany. Together, these studies reveal mediation as a locus of negotiation between linguistic transcoding, empathy, cultural awareness and institutional constraints – a process that reflects the broader tension between the positioning of the actors in the triadic interaction, including their cultural, social and personal background, and the effectiveness of healthcare communication and patients' adherence to the treatment.

The section *Healthcare Communication in Multilingual Settings* includes three contributions in which translinguistic practices are presented. Sabrina Machetti and Giulia Peri's *"Bridging Communication Gaps in Healthcare through Mediation: The PULSE 2.0 Best Practice"* presents an innovative European project integrating digital learning tools and the CEFR's mediation descriptors to train caregivers in multilingual communication. The contribution emphasizes the technological dimension and accessibility to technology as fundamental aspects of equality in healthcare. The question of equality and inclusion in healthcare is addressed from another perspective by Mihail Sotkov. In his *"Consent Methods for Enrolment in Acute Clinical Trials,"* Sotkov applies functional linguistics to revise informed consent documents, showing how linguistic analysis can contribute to ethical medical communication. He demonstrates how these documents can sometimes

become a purely bureaucratic tool that "forces the institutional processing of the patient." Alessandro Vallati's *"Fostering Health Communication with Sinophone Patients in Italy: Towards an Ethical and Culture-Centered Framework for Language and Cultural Mediation Training"* addresses the ethical and methodological challenges in training mediators for Chinese Italian medical contexts, combining linguistic rigor with moral responsibility. To broaden the perspective on LCMs, the researcher offers a series of definitions from studies on LCM and Medical Humanities published in the People's Republic of China. One of the crucial values in mediated communication is trust; therefore, studies on perception of LCMs' activity are particularly necessary. Taken together, these studies highlight one important aspect of the effectiveness of LCMs' activity: the connection between the language policy of the health systems and the linguistic landscape of the patients and the operators that live in it.

In *Asian Perspectives on Advanced Technologies: Ethical Issues*, two articles extend the focus to technological innovation and its ethical implications. Anna Di Toro's *"'The Morally Noble Person is Not a Tool': An Introduction to Chinese Perspectives on AI Ethics"* situates discussions of artificial intelligence within Chinese philosophical traditions, emphasizing the non-anthropocentric and relational ethics derived from Confucianism, Daoism, and Buddhism and advocates for a true global debate on ethical AI. Imsuk Jung and Kukjin Kim's *"AI Robots and Dolls for Elderly Care. Exploring Emotional Language in Human-AI Interaction: Case Study of Hyodol in South Korea"* examines how emotional communication between humans and AI devices reshapes elderly care practices in South Korea, reflecting local cultural values such as filial piety (*hyo*). These analyses illustrate how technology, far from being culturally neutral, embodies and reproduces specific ethical and emotional models of human interaction.

Medical Humanities is lastly presented in the section *Declinations of Medical Humanities*: not as a minor discipline, but as an emerging area that intersects all the issues above. David Salomoni's *"What We Read, What We Learn: notes on a Bibliography as a Window into the Medical Humanities"* proposes a meta-analytical approach, treating bibliographic work as both mirror and map of disciplinary evolution. The author presents studies advocating for the humanization of the medical curriculum from a diachronic as well as a geographic perspective, aiming to attenuate the progressive decline of empathy in healthcare. Narrative medicine emerges as a second key theme, connecting the humanities to medical training and practice. In *"Medical Students' Perception of Narrative Medicine: a Case Report"* Marta Aurora investigates how medical students in Siena perceive the role of narrative competence in clinical communication. The findings underscore both the potential and the underdevelopment of narrative-based education in Italy, as the results of a local survey suggest. Federico Trentanove's *"Towards an Inclusive Narrative Medicine: Reflection on The Limits and Opportunities of Narrative Medicine in Engaging with Diversity"* provides a theoretical reflection on the epistemological limits of narrative approaches, questioning their implicit universalism and advocating for an inclusive model that is attentive to diverse voices, including non-native speakers and neurodivergent individuals. Trentanove proposes visual arts, drawing, and other forms of artistic expression as means for more inclusive narrations, authentically open to imperfection,

uncertainty, and imagination. From this perspective, a non-peer-reviewed contribution by Annalisa Bianco (*Le Storie degli altri (Other People's Stories): an 'Extra Moenia' Theatre Project*), a theatre director involved in "theatre beyond theatre walls," shares a valuable experience of a theatre workshop centered on narrative medicine. This workshop involved doctors, nurses, healthcare workers, and students of medicine or mediation. Developed in collaboration with the University for Foreigners of Siena, Siena University Hospital, and Médecins sans Frontières, the workshop was held in 2024 within the framework of the THE project (Spokes 3/3–4 and Spoke 10) and culminated in a public performance. This theatre experience, titled "Other People's Stories," focused on the act of sharing, based on Arthur Frank's idea that narratives emerge through our engagement with the stories of others (see the contribution by Trentanove).

Concluding remarks

Taken together, the contributions in this special issue affirm the necessity of approaching health and well-being as multidimensional phenomena situated at the intersection of language, culture, technology, and ethics. They collectively argue that human-centered innovation requires dialogue between disciplines traditionally considered distant: medicine and linguistics, anthropology, ethics, and artificial intelligence.

By situating these discussions within the Tuscany Health Ecosystem, this issue also demonstrates how interdisciplinary collaboration can inform public policy and educational practice. The integration of humanistic inquiry within scientific and technological projects enriches not only our understanding of care but also the institutional environments in which care takes place.

In times when communication increasingly occurs through screens, algorithms, and digital records, the challenge is to ensure that technology serves human connection rather than replacing it. As Kleinman, Cassell, Charon, and Wadensjö remind us in different ways, care is an interpretive, relational, and ethical act. This special issue of *mediAzioni* invites readers to keep that principle at the center of future research and practice, reaffirming that the health of individuals and communities ultimately depends on our capacity to listen, translate, and understand across boundaries.

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