Compassionate Robots, Hostile Borders: The Paradox of Empathetic Technology in Asylum Adjudication

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***Abstract*— As artificial intelligence increasingly mediates asylum processes, robots equipped with empathetic capabilities may be proposed as compassionate solutions to address procedural, backlog, rigidity and emotional detachment in border security contexts. This paper critically examines four prominent approaches to designing empathetic robots for asylum interviewing: emotion recognition systems, cultural adaptation frameworks, behavioral synchronization techniques, and trauma-informed interaction protocols. We interrogate how these seemingly benevolent technologies might function within asylum contexts. This scrutiny reveals a fundamental paradox: while these systems appear to humanize border processes through technological compassion, they risk constituting sophisticated forms of humanitarian control that obscure structural violence while legitimizing exclusionary practices. Drawing on critical border studies and surveillance scholarship, we argue that empathetic robots may inadvertently reinforce power asymmetries between asylum seekers and state authorities rather than addressing the systemic problems asylum seekers face. We conclude by advocating for experience-based co-design, community-led monitoring, and participatory governance approaches that prioritize genuine accountability and meaningful community participation over technological solutions that may mask rather than address the systemic inequities embedded within contemporary migration governance.**

I. Introduction

Contemporary asylum adjudication has become increasingly mediated by AI-driven automation. Caseworkers now employ tools such as speech-to-text transcription, machine translation, biometric identification, and data-mining analytics to process testimony and documents [1], [2]. Machine learning can improve the speed, efficiency, and consistency of decision-making across large caseloads [1], while new projects have piloted real-time language translation during interviews to reduce reliance on costly interpreters [2]. Several European authorities are experimenting with these technologies: Finland has used automated speech-to-text to produce written minutes of asylum interviews [3], while Italy has tested speech-recognition tools to transcribe interviews [2], and Germany applies name-transliteration, dialect analysis, and extracted location data to verify origin stories [3]. These interventions are increasingly relevant to asylum interviews—formal, high-stakes interactions where applicants recount their claims for protection to state authorities. Given their emotionally charged nature, these interviews are sensitive sites where automation may extend beyond back-end processing to include embodied robotic participation. Digital chatbots and virtual agents are already being deployed: the X2AI platform's chatbot *Karim* provides personalized psychological counseling via SMS in Arabic to Syrian refugees [4], while MarHub's *Mona* chatbot guides asylum-seekers through complex application steps. However, such technological interventions risk reducing the asylum-seeking process to procedural steps within a bureaucratic apparatus rather than recognising it as a spatially and psychologically charged experience demanding nuanced, human-centred engagement. Machine translation systems often struggle with regional accents, idioms, or trauma-informed narratives, leading to misinterpretation [1], [2]. Scoring algorithms and predictive analytics risk encoding biases, reproducing systemic discrimination [1]. As EU policy reviews note, such tools benefit state authorities while systematically excluding migrants' perspectives from development processes [2]. A growing number of researchers have proposed embodied AI agents as *compassionate mediators* for asylum seekers. The GeeBot project introduces a social robot to support refugee children's integration [5], while tools like *Karim* offer psychological care [4]. While autonomous systems like AVATAR [1] and technologies developed by Frontex for the European Union[2] are being actively tested in asylum and border procedures, the initiatives described above signal a growing trend toward designing robotic systems specifically for high-sensitivity refugee contexts. Human–robot interaction scholarship emphasizes that empathy and trust are critical when robots are deployed in high-stakes situations [6]. However, scholars caution that robotic interventions in vulnerable contexts raise ethical concerns about simulated compassion appearing manipulative or inappropriate [7], [4].This tension—between technological compassion and technological harm—defines our central paradox. While embedding empathy in robotic systems seems inherently beneficial, we argue that such designs may inadvertently exacerbate asylum seekers' vulnerabilities. In the following sections, we examine approaches to robotic empathy and critique how these may reinforce power asymmetries and validate coercive border practices under the guise of humanitarian care.

II. Critical Perspectives on Border Control Technologies

Before examining specific approaches to robotics in asylum contexts, it is essential to critically assess the foundational technologies and assumptions underlying these systems. This section reviews key scholarship that challenges the scientific basis of emotion recognition technologies and

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[1]https://eller.arizona.edu/departments-research/centers-labs/border-security-immigration

[2]https://abolishfrontex.org/blog/2023/11/18/ai-in-border-control-and-surveillance-current-and-future-implications/

examines how technological interventions in border contexts may serve political rather than humanitarian purposes.

A. Algorithmic Harms and the Limits of Emotion Recognition

Contemporary approaches to technologies in asylum and border contexts often build upon fundamentally flawed assumptions about the detectability and universality of human emotional expression. Scholars argue that emotion recognition algorithms operate through instructions such as "algorithmic psychometrics," wherein complex human experiences are reduced to standardized data points that serve institutional rather than humanitarian purposes [8]. As Stark and Hoey argue, emotion recognition systems "recognize, infer, and harvest emotions using data sources such as social media behavior, streaming service use, voice, facial expressions, and biometrics in ways often opaque to the people providing these data" [8]. This extraction of emotional data becomes particularly problematic in asylum contexts, where the stakes of misrecognition extend beyond mere algorithmic error to questions of life, death, and fundamental human dignity. Research from scholars further reveal the "conceptual pitfalls of emotion AI," demonstrating how these systems engage in what they term "emotion commodification": the transformation of complex human experiences into marketable data products that serve institutional efficiency over genuine care [9]. Their analysis reveals how these technologies create "(anti)-intentional harms" by normalizing surveillance while claiming to provide support. When applied to asylum interviews, such systems risk transforming intimate testimonies of trauma and persecution into algorithmic inputs for credibility assessment, fundamentally altering the nature of the asylum process from human encounter to technological transaction. Crawford provides perhaps the most comprehensive critique of emotion recognition technologies, arguing that "there is no good evidence that facial expressions reveal a person's feelings, but big tech companies want you to believe otherwise." [10]. Her analysis in *Atlas of AI* reveals how emotion recognition systems are grounded in discredited 19th-century physiognomy and Paul Ekman's contested theories of universal facial expressions. Crawford demonstrates that these technologies function as "empires of feeling": extractive systems that impose Western categories of emotional expression on culturally diverse populations while claiming scientific objectivity. [10] In asylum contexts, such imposed universality becomes a form of cultural violence, erasing asylum seekers' own understandings of emotional expression while subjecting them to technological systems designed by and for dominant cultural groups.

B. The Material Politics of Border Technology

Critical border studies scholarship reveals how technological interventions in migration governance function not as neutral tools but as political instruments that serve to legitimize and expand exclusionary practices. [11] demonstrates how "humanitarian borderwork" operates through seemingly benevolent interventions that ultimately reinforce rather than challenge systems of exclusion. Border technologies, including proposed empathetic robots, participate in what she terms the "spectacle of humanitarian intervention": visible displays of care that obscure the structural violence embedded within contemporary migration governance. [12] extends this analysis through his concept of "violent compassions," revealing how humanitarian design functions as a form of "technological solutionism" that promises to address systemic problems through design interventions while leaving underlying power structures intact. His analysis demonstrates how "the politics of humanitarian design" operates through "violent compassions": compassionate technologies that legitimize rather than challenge structural inequities. Empathetic robots in asylum contexts risk becoming paradigmatic examples of such violent compassions, offering the appearance of humanitarian care while facilitating more efficient processing and potential exclusion of asylum seekers. [13] identifies this dynamic as the "dialectic of care and control," wherein humanitarian interventions simultaneously expand and legitimate systems of border enforcement. His analysis reveals how technologies deployed under humanitarian justifications often serve to "re-produce the humanitarian border": creating new mechanisms of control while maintaining the appearance of ethical progress. Empathetic robots exemplify this dialectic, promising compassionate engagement while potentially enabling more sophisticated forms of surveillance and assessment that serve state security imperatives rather than genuine refugee protection. Moreover, such technological interventions risk producing what could be called a politics of forgetting borders—where the spatial, legal, and historical violence of borders is rendered invisible through design. By embedding care and empathy into automated systems, these technologies do not dismantle borders; rather, they aestheticize and obscure them, presenting a seamless humanitarian interface that depoliticizes the very idea of the border as a site of contestation and resistance.

C. Problematizing Human-Robot Interaction in Vulnerable Contexts

While mainstream HRI research consistently frames robotic interventions with refugee populations as inherently beneficial, critical analysis reveals how these approaches reproduce rather than challenge existing power asymmetries. Vogt [14] and Valguarnera [15] exemplify this trend, presenting NAO robots for language learning and storytelling as unproblematically positive interventions for refugee children. However, these studies fail to question how such technologies might function as instruments of assimilation that erase rather than honor cultural differences, or how they might normalize technological mediation of fundamental human experiences such as learning and storytelling. The consistent framing of robots as "supportive tools for refugee integration" in HRI literature [16], [17], [18] reveals what we term "technological benevolence": the assumption that technological intervention is inherently superior to human-centered approaches. This framing obscures questions about who defines "integration," whose cultural norms are privileged in robotic design, and how these technologies might serve state assimilation imperatives rather than genuine refugee empowerment. When extended to asylum contexts, such uncritical technological optimism becomes particularly dangerous, as it positions robotic mediation as an improvement over human interaction while potentially facilitating more efficient extraction of vulnerable

narratives for state assessment and potential exclusion. [6] and [7] acknowledge that robotic interventions in vulnerable contexts raise ethical concerns about "simulated compassion appearing manipulative," yet HRI research has largely failed to develop frameworks for understanding how these concerns might be amplified in the power-laden dynamics of asylum adjudication. The gap between acknowledging ethical concerns and developing critical frameworks for analysis reveals the limitations of mainstream HRI approaches to vulnerable populations, particularly when those populations interface with state power through asylum processes.

III. Can Robots Make Asylum Interviews More Humane or More Problematic

This section critically examines how contemporary empathetic robotics approaches might function within asylum interview contexts. While there is growing interest in affective computing and socially responsive robotics for high-stakes settings, these technologies carry unexamined assumptions about empathy and care that may not hold in the power-laden dynamics of asylum processes. Drawing on HRI research, we interrogate four design dimensions that currently shape empathetic robotics. Rather than celebrating their potential, we ask whether these systems risk simplifying human suffering into detectable signals, and what might be lost when machines simulate compassion in deeply human, ethically charged encounters.

A. Emotion Recognition and Adaptive Response Systems

Modern robotic empathy often relies on emotion recognition systems designed to detect, interpret, and respond to human emotional states through multimodal inputs [19]. In theory, such systems could be relevant for asylum contexts, where applicants frequently experience heightened emotional stress, trauma, and cognitive strain. Robots in these settings might use combinations of facial expression analysis, vocal tone, and physiological signals to infer distress, adjust their questioning pace, or simplify language when signs of overwhelm are detected. However, the scientific basis for assigning discrete emotion labels to facial expressions is widely disputed [20]. Despite this, emotion recognition remains a major focus in HRI research, and such systems are still being proposed for application in sensitive, high-stakes settings like asylum interviews.

B. Cultural Adaptation and Personalization Frameworks

Cultural adaptation systems are currently implemented in social robots deployed across different countries, enabling robots to adjust communication styles and interaction patterns for diverse cultural contexts. [21] provide a comprehensive review synthesizing two decades of empirical evidence on cultural influences in human-robot interaction, examining how people's perceptions of robots are informed by their national culture and experiences across different countries. For instance, scholars like [22] demonstrate a culturally adaptive system for the KOBIAN-R robot that generates different versions of facial expressions optimized for Japanese and Western subjects, with empirical validation showing improved recognition rates across cultural groups. Taking inspiration from this, in asylum interviewing, empathetic robots could employ cultural localization systems that adapt interaction styles, communication patterns, and behavioral norms to specific cultural backgrounds. For asylum interviews, robots would utilize pre-loaded cultural profiles matching asylum seekers' countries of origin, adjusting greeting protocols, spatial positioning, eye contact patterns, and conversational styles accordingly. The system might also incorporate religious considerations, gender interaction preferences, and culturally-appropriate empathy expressions. Machine learning algorithms could further personalize these approaches based on individual responses, creating tailored empathic interactions that appear culturally sensitive and personally attuned.

C. Behavioral Synchronization and Mirroring Techniques

Behavioral synchronization is widely used in therapeutic robots and social companions, where robots mirror human movements and expressions to build rapport and trust with users. Research on behavioral mimicry in human-robot interaction has revealed important insights about rapport building. [23] found that robots using speech entrainment and self-disclosure led to increased positive emotions and greater engagement in children during storytelling activities. Such rapport-building behaviors could enhance trust and communication effectiveness in asylum interviews. Robots could achieve empathic connection through behavioral synchronization, subtly mirroring human gestures, speech patterns, and emotional expressions to create rapport. In asylum settings, interview robots could employ micro-expression mimicry, vocal rhythm matching, and postural alignment to establish trust and emotional connection with applicants. The system might synchronize breathing patterns during stressful moments, mirror cautious body language to appear non-threatening, or adapt speech pace to match asylum seekers' processing speeds.

D. Trauma-Informed Interaction Protocols

Trauma-informed approaches are currently integrated into companion robots for elderly care and therapeutic robots for PTSD treatment, incorporating safety principles and trigger-avoidance strategies [24], [25]. In asylum interviewing contexts, empathic robots would integrate trauma-informed care principles, recognizing trauma symptoms and adjusting interactions to avoid re-traumatization while building therapeutic rapport. Asylum interview robots could implement safety-focused protocols including consistent behavioral patterns, predictable interaction sequences, and choice-offering throughout the process. The system could detect trauma triggers through physiological monitoring and behavioral analysis, automatically shifting to grounding techniques or supportive responses. Advanced protocols might include memory systems that track previously identified triggers across interview sessions, ensuring consistent trauma-sensitive approaches while maintaining detailed records of emotional responses and coping strategies.

IV. The Paradox of Compassionate Control: A Critical Analysis

While the four empathetic robot approaches outlined in Section III appear inherently beneficial for vulnerable asylum

seekers, we argue that these well-intentioned technologies may inadvertently create new forms of humanitarian control. Drawing on critical theories of power and border governance, this section situates empathetic robotics within what scholars like Achille Mbembe have termed necropolitics—the capacity of modern states to determine who may live and who must die. Rather than acting as neutral tools of care, empathetic systems may thus participate in assigning differential value to human life, filtering whose suffering is legible and whose is administratively bypassed.

A. The Surveillance Paradox of Emotion Recognition Systems

The emotion recognition and adaptive response systems described in Section III.A present a fundamental contradiction in asylum contexts. While designed to detect distress and provide appropriate support through multimodal emotion recognition and real-time adaptation, these same systems may function as sophisticated surveillance mechanisms that exemplify what Burawoy [26] identifies as *symbolic violence*—systematically silencing marginalized voices while legitimizing existing power structures through the appearance of compassionate reform. When robots monitor facial expressions, voice patterns, and physiological responses during testimony, they transform intimate emotional experiences into algorithmic data points that could influence credibility assessments. This technological mediation risks reducing asylum seekers' affective expressions into standardized indicators requiring external validation, rather than recognizing them as legitimate self-knowledge. The adaptive response capabilities that appear compassionate may override individuals' own interpretations of their emotional states, imposing predefined emotional taxonomies that obscure culturally diverse ways of expressing distress.

B. Cultural Adaptation as Performative Inclusion

The cultural adaptation and personalization frameworks outlined in Section III.B, despite appearing inclusive through pre-loaded cultural profiles and personalized machine learning, may constitute what we call *performative multiculturalism*—standardizing cultural expressions within predetermined taxonomies that misrepresent complexity while systematically erasing the nuanced knowledge systems that inform asylum seekers' worldviews. Rather than genuine cultural responsiveness, these design protocols often operate within what Keshavarz [27] describes as *humanitarian design*—technological interventions that appear compassionate while concealing deeper structural inequities. The robot's ability to adjust greeting protocols, spatial positioning, and conversational styles may create an illusion of sensitivity, while still functioning within constrained frameworks that limit authentic cultural expression and normalize dominant ways of being.

C. Behavioral Synchronization and Manufactured Intimacy

The behavioral synchronization and mirroring techniques described in Section III.C raise particular ethical concerns in asylum contexts. When robots employ micro-expression mimicry, vocal rhythm matching, and postural alignment to build rapport, they create what we term *technological intimacy*—artificial connections wherein robots mirror social cues to establish rapport that may manipulate disclosure under false pretenses of understanding. This manufactured empathy may become problematic when considering the high-stakes nature of asylum interviews. The breathing pattern synchronization and cautious body language mirroring that appear supportive may induce asylum seekers to share traumatic experiences based on misleading perceptions of safety, rather than authentic human compassion. These approaches operate within what Pallister-Wilkins [28] identifies as *humanitarian borderwork*, wherein seemingly benevolent interventions ultimately reinforce exclusionary systems under the guise of care.

D. Trauma-Informed Protocols and Extractive Care

Perhaps most concerning are the trauma-informed interaction protocols outlined in Section III.D that, while appearing protective through safety-focused approaches and trigger-avoidance strategies, may facilitate more efficient extraction of traumatic narratives. The consistent behavioral patterns, grounding techniques, and memory systems designed to track triggers across sessions create environments that appear safe while serving data collection imperatives rather than genuine therapeutic purposes. This reflects what Novak [29] identifies as the *dialectic of care and control*—wherein the detailed records of emotional responses and trauma-sensitive approaches normalize technological mediation of deeply personal experiences while positioning institutional efficiency as humanitarian progress.

V. Beyond Technological Solutionism: Toward Genuine Accountability

Rather than pursuing technological solutions that may mask systemic inequities, we advocate for approaches that prioritize genuine accountability and meaningful community participation in asylum governance. This requires moving beyond "technological solutionism"—the belief that robotic empathy can address fundamental structural problems embedded within contemporary migration governance. First, experience-based co-design (EBCD) represents a foundational alternative approach, operating as a "values-led process centered around five key principles: equal partnership from the beginning; openness to working together towards a shared goal; respect for different views, experiences and diversity; and working together through all stages of the project" [30]. For instance, the Routes to Wellness project exemplifies this methodology by co-designing peer-led mental health support with refugees through "eight co-design workshops with providers and users" where "touchpoint data will be used to help shape the PSW model" [31]. Similarly, participatory design workshops in refugee camps demonstrate that refugees gain "a sense of ownership and belonging by involving them in their shelter design" [32]. Second, community-led monitoring through refugee-led organizations (RLOs) demonstrates sustainable alternatives where "being part of the same community, they are intimately aware of the most pressing needs and viable solutions" and "demonstrate remarkable efficiency and impact in creating and executing community-specific projects" [33]. Furthermore, research confirms that effective support requires "assessments

of needs, development of meaningful support mechanisms, and monitoring and evaluation" that "must involve various stakeholders, including asylum seekers and refugees" as decision-makers rather than passive beneficiaries [34]. Third, participatory governance frameworks recognize that "refugee participation in decision-making helps to build confidence in exercising basic rights and fostering a sense of belonging and trust in host communities" [35]. However, meaningful participation requires addressing power imbalances where traditional approaches "framed people seeking asylum as dependent and excluded them from decision-making processes" [36]. In contrast, organizations like Women for Refugee Women demonstrate power redistribution by ensuring research is "carried out by a team of seven women with personal experience of the UK's asylum system" [37]. Fourth, technological accountability mechanisms can meaningfully support community-led approaches by reimagining the role of robotic monitoring systems in asylum interviews—not as instruments of surveillance for those in power, but as safeguards for those seeking protection. Instead of deploying technology to increase institutional efficiency, we advocate for robotic systems that are explicitly designed to detect bias, procedural violations, and human rights infringements. Such systems can function as real-time tools for asylum seekers to document and contest misconduct. Previous research has shown intelligent systems could be designed and deployed effectively to identify police officers at risk of misconduct. [38]. Within asylum contexts, robotic systems can similarly be envisioned as advocates for individuals who might be vulnerable or at-risk, thus reversing traditional power dynamics by positioning accountability technologies as instruments of empowerment rather than control. These proposals must also confront a deeper ethical question: should we be designing technologies that optimize border enforcement at all? The assumption that borders are inevitable or necessary forecloses more radical possibilities—such as reimagining human mobility, dismantling exclusionary nation-state logics, or resisting the carceral infrastructures that frame asylum seekers as threats rather than rights-bearing individuals.

VI. Conclusion

This paper has examined the promise of compassionate robotics in border security contexts, revealing how seemingly empathetic technologies may paradoxically reinforce the very systems of exclusion they claim to humanize. While emotion recognition, cultural adaptation, behavioral synchronization, and trauma-informed protocols appear to offer more humane alternatives to rigid bureaucratic processes, our critical analysis demonstrates that these interventions risk constituting sophisticated forms of humanitarian control that obscure structural violence while legitimizing exclusionary practices. The central tension we have identified—between technological compassion and systematic oppression—demands urgent attention from roboticists, policymakers, and human rights advocates. Rather than designing robots that make border regimes more palatable through artificial empathy, we must confront the fundamental question of whether technological solutions can ever adequately address the structural inequities embedded within contemporary migration governance. Moving forward, any deployment of robotic systems in border contexts must prioritize genuine accountability, meaningful participation by affected communities, and transparent acknowledgment of the limitations inherent in technological approaches to human suffering. Only through such critical engagement can we ensure that future innovations serve humanitarian principles rather than merely masking continued exclusionary practices through technological compassion.Future work must reckon with difficult but necessary questions: Can robotic systems ever enact care without reproducing the structural violence of borders? What would it mean to center abolitionist, decolonial, or non-state perspectives in the design of refugee technologies? How might we reimagine empathy, not as a data-driven function but as a collective political commitment to dismantling exclusionary systems? Compassion alone is not justice, and without political reckoning, even the most empathetic robots may only serve to soften the edges of an unyielding border regime.

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