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Staging the Posthuman Era in China: Reimagining Performing Arts Through Robot, Digital, and XR Theatre

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ABSTRACT

This extended abstract examines how contemporary Chinese theatre is reshaping its artistic boundaries by integrating posthuman concepts, robotics, digital avatars, and extended reality (XR) technologies. Drawing from my doctoral research, the study employs a qualitative case-study methodology to analyze three innovative productions: the robot-driven performance *The City of Big Dumb Objects*, a digital avatar-based Chinese opera project utilizing VR and motion capture, and an XR adaptation of *Macbeth*. These cases demonstrate the increasing agency of non-human performers and challenge conventional understandings of identity, embodiment, and the human-machine divide. The findings reveal that such technological interventions actively destabilize the distinctions between human and machine, physical and virtual spaces, and traditional versus futuristic aesthetics. By doing so, they establish a new critical framework for examining the convergence of technology and live performance. The study concludes that these advancements hold significant potential to redefine theatrical practice, ultimately transforming the creative dynamics among performers, audiences, and technological systems.

Keywords: *Posthuman; Robot Theatre; XR Digital Theatre; Performing Arts; Theatre Evolution*

INTRODUCTION

The rapid integration of robotics, digital avatars, and Extended Reality (XR) technologies into contemporary performance marks a pivotal shift towards what can be termed the "posthuman era" in theatre. In China, this technological embrace occurs within a unique context of rapid modernization, rich traditional arts heritage, and state-supported innovation. This convergence challenges foundational concepts of liveness, presence, and the human-centric paradigm of performance (Phelan, 1993; Auslander, 1999). This extended abstract, rooted in broader doctoral research, investigates this phenomenon by asking: How are robot, digital, and XR technologies reconfiguring the aesthetic, experiential, and ontological dimensions of performing arts in China? It positions the analysis within posthumanist discourse (Braidotti, 2013; Hayles, 1999), which questions the primacy of the human subject and explores new assemblages of agency. Through an analysis of three landmark case studies, this research argues that Chinese practitioners are not merely adopting technology but are synthesizing it with local aesthetics to forge a distinct path in global posthuman performance.

RESULTS AND DISCUSSION

Analysis of the three case studies reveals a multifaceted reconfiguration of theatrical practice across three core dimensions: the performance subject, dramatic space, and the performer's body. The robot-driven performance “*The City of Big Dumb Objects*” (Shanghai) challenges anthropocentric performance by employing large-scale, non-humanoid machinery as primary performers. Its aesthetic derives from the “mechanical sublime” of synchronized robotic movement, generating affect through scale, geometry, and algorithmic choreography rather than simulated human emotion. Agency is distributed across a network of human programmers, engineers, and robotic actuators (Latour, 2005), fundamentally decentering the human actor and prompting a reconsideration of empathy and narrative engagement in a non-human-centric stage. In contrast, China's first XR theatre production, *Macbeth* (Beijing), utilizes Extended Reality to dissolve the boundaries between physical and virtual stage space. By overlaying digital imagery and characters onto the live performance via headset, it creates an “augmented liveness.” This allows the psychological landscape of the play its ghosts, daggers, and prophecies to become spatially interactive. The audience's role shifts from passive viewer to active navigator within a hybrid reality, redefining immersion and the spatial dynamics of classical text.

Finally, the **VR Chinese Opera Motion-Capture Simulation** project addresses the preservation and transformation of intangible cultural heritage. High-fidelity motion capture digitizes the precise gestures and movements of master performers. In the VR environment, this data enables both archival preservation and novel interactive experiences, such as allowing users to “wear” and learn from a digital master's embodied knowledge. This raises critical questions about the technologization of tradition: while it offers innovative tools for engagement and learning, it also engages with tensions regarding the “aura” of live transmission and the potential reformulation of embodied knowledge into data.

These cases collectively illustrate that the posthuman turn in Chinese theatre is not a uniform movement but a diverse exploration. It grapples with creating new aesthetic languages for non-human performance, re-engineering theatrical space for immersive co-presence, and re-mediating traditional body techniques for digital futures.

Table 1. Case Studies Analysis: Technology, Aesthetic Focus, and Theoretical Implications

Production	Core Technology	Key Aesthetic/Theoretical Intervention
1. <i>The City of Big Dumb Objects</i> (Shanghai)	Robotics, Automation, Synchronized Control Systems	Decenters the human performer; explores “mechanical sublime” and distributed agency.

2. XR <i>Macbeth</i> (Beijing)	Extended Reality (XR), Spatial Computing, Real-time Rendering	Creates hybrid physical-virtual performance space; redefines immersion and narrative spatiality.
3. VR Chinese Opera Motion-Capture Simulation	High-precision Motion Capture, Virtual Reality (VR), Data-driven Avatars	Digitizes and re-embodies intangible cultural heritage; interrogates technologization of tradition.

Figure 1. Conceptual Framework: Three Dimensions of Posthuman Theatre Reconfiguration in China

CONCLUSION

This study demonstrates that the integration of robot, digital, and XR technologies in Chinese performing arts constitutes a significant and culturally nuanced posthuman turn. The analyzed cases reveal transformative shifts across the subjects, spaces, and bodies of performance. These technological interventions do not merely augment existing forms but actively generate new aesthetic paradigms, audience relationships, and philosophical inquiries about agency and presence. By situating global technological trends within specific Chinese artistic and cultural contexts, these practices contribute a vital perspective to international discourse on posthuman performance. They highlight a movement beyond imitation towards synthesis, where technology becomes a medium for both critiquing and renewing theatrical tradition. Future research should further investigate the long-term impact of these practices on creative workflows, audience reception, and the evolving definition of "liveness" in an increasingly technologically mediated world.

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