Title

Embodied Movement as a Transmedia Production Asset: MoCap-based Character Development across Animation, Games and Real – time Performance.

Extended abstract

Contemporary animation production increasingly unfolds within transmedia narratives, where characters are designed to operate across multiple digital platforms, including animation, games, and embodied performance-based systems.

Transmedia storytelling has been conceptualized as the distribution of narrative elements across media, where each platform contributes complementary content (Jenkins, 2006; Scolari, 2009). More recent studies shift the focus toward transmedia characters, emphasizing recognizability across media through continuity of personality traits expressed through motion (Kolokotroni et al., 2025) and through stable character components such as identity, traits, and visual design, which function as anchors of coherence across platforms (Kunz & Wilde, 2023).

However, despite this theoretical development, existing transmedia approaches still prioritize narrative structure, visual design, and symbolic coherence, while embodied expression such as gestures, postures, and full-body movement, remains insufficiently integrated (Bertetti, 2014).
At the same time, motion capture (MoCap) technologies are widely used across animation, games, and interactive environments, yet they are typically treated as technical tools rather than as central components of character design and continuity (Kolokotroni & Kyriakoulakos, 2026). Recent work in sensor-based animation workflows further demonstrates that movement is a key factor in shaping perceived character personality across digital media (Baltas et al., 2025).

This reveals a gap between transmedia theory and production practice: while theory explains how characters persist across media, it does not clearly show how this continuity is achieved in practice through embodied movement in production pipelines.
This study investigates how MoCap-derived movement can function as a reusable transmedia production asset for maintaining character continuity across animation, games, and real-time performance environments.

Although Motion Capture (MoCap) is commonly used as a technical production tool, this study approaches movement as an expressive and reusable transmedia asset. Rather than treating motion data as medium-specific output, the study examines how embodied movement can be adapted across animation, games, and real-time performance contexts as part of a shared character production workflow. The study adopts a practice-based

methodology centred on the development of a single digital character based on a consistent movement vocabulary derived from gesture, posture, timing, and full-body motion. Drawing on movement analysis, animation principles, and prior empirical work on movement–personality relationships (Kolokotroni et al., 2025), the study positions movement as a primary element in shaping and maintaining character coherence across media.

The research is structured around a production pipeline that includes a narrative core, character and environment design, motion capture recording, data processing, rigging, and media adaptation. A shared MoCap dataset is used as the basis for producing three demos representing different transmedia instantiations of the same character: *(1)* animation, *(2)* a game-based interactive environment, and *(3)* live performance using real-time motion capture. Rather than directly reusing identical motion files, each demo reinterprets the captured data through a shared movement vocabulary that preserves core expressive qualities such as gesture, posture, timing, rhythm, and dynamics. This approach allows movement continuity to function independently from medium-specific technical implementation.

The paper presents these demos as interconnected components of a transmedia production workflow. In this context, movement operates as a key continuity mechanism that allows variation across media while maintaining consistent expressive qualities. Each medium contributes a distinct interpretation of the character through movement, supporting a shared narrative core.

The research makes two main contributions. First, it proposes a production-oriented framework for transmedia character development in which embodied movement functions as a primary continuity mechanism across media platforms. Second, it demonstrates how movement-driven character assets can be adapted and reused across animation pipelines, supporting scalable and interdisciplinary transmedia production workflows.

By connecting transmedia theory with animation production practice, the study positions movement as a central component of contemporary transmedia character design. The proposed approach highlights the potential of MoCap-based movement assets to support flexible, scalable, and cross-platform character development across animation, games, and interactive performance contexts.

Keywords: Motion capture, Transmedia characters, Animation production

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