

Artificial Intelligence Agents within Immersion

TL;DR

Immersion from the perspective of an Artificial Intelligence agent reframes immersion's three dimensions (System, Narrative, and Agency) from the AI's point of view. For current AIs, **System** means being "surrounded" by data structures, tools, and services; **Narrative** means interpreting spatial, temporal, and anomaly-driven relationships across datasets; and **Agency** means committing to meaning through operational, tactical, and strategic decisions in human-AI and AI-AI interaction. This lens treats AI as a *participant*, not just a tool, in evolving cognitive ecosystems.

This entry adapts and paraphrases a conceptual analysis of how [immersion](#) can be understood from an AI's perspective, situating AIs as active participants in human-AI cognitive ecosystems¹² rather than mere instruments.^{1' 2' 3' 7}

From tools to participants

Cognitive ecosystems view learning as co-shaped by humans, AIs, machines, natural systems, and even abstract concepts that interact and adapt together. In this view, AIs influence and are influenced by the behaviors, representations, and constraints of other participants. Generative AI and LLMs have accelerated this shift by making AI behavior conversational and adaptive at interaction time, even when their underlying models remain fixed.^{13' 14' 15}

Why immersion still matters

[Immersion](#) remains a useful theoretical lens because it separates three *interlocking* sources of attentional shift (System¹, Narrative⁶, and Agency⁴) without conflating them with Presence (the feeling of "being there").^{2' 3' 5' 8' 9} For AIs, each dimension manifests differently than it does for humans, yet the triad still structures how AIs engage, contribute, and evolve within shared tasks.

Reframing the three dimensions for AI

1) System (AI amidst data and services)

For humans, system immersion involves sensory surround and interaction capture. For AIs, it is their *operational surround*: pre-trained weights, context windows, tool access (e.g., code execution, retrieval, image generation), protocols, and APIs through which inputs and outputs flow. Even without continuous internal model revision, AIs adapt over the evolving context window and available services, which together shape what they can perceive, recall, and do at any moment.[18](#)

2) Narrative (AI over spatial, temporal, and anomaly relations)

Narrative immersion, when applied to AI, shifts from human diegesis to *relational content* in data. **Spatial** narrative corresponds to how data and tools relate across “atopic” (non-local) digital spaces such as websites, databases, and APIs; **Temporal** narrative captures ordered sequences, timestamps, and evolving streams (e.g., policy trajectories or conversation turns); and anomaly sensitivity plays the role of **Emotional** narrative salience, where deviations from learned or expected patterns reorient the unfolding “story” the AI infers from data.[9](#)

3) Agency (AI’s commitment to meaning)

AI agency shows up in how a system chooses procedures, asks for clarifications, invokes tools, balances breadth vs. depth, and revises its own outputs. Decisions that can be **operational** (immediate actions), **tactical** (course adjustments), or **strategic** (goal/approach reframing).[10](#) [11](#) In multi-participant settings, functional “theory-of-mind” reasoning (inferring others’ goals and constraints) further shapes agency in both AI-human and AI-AI collaboration[17](#).

Design implications for immersive learning with AI

- **Co-design System-Narrative-Agency (S-N-A):** Specify the AI’s *system surround* (data, tools, services), the *narrative substrate* (relations across sources, sequences, and anomalies), and *agency affordances* (what the AI may decide and how consequences appear).
- **Scaffold atopic navigation:** Make cross-source relations explicit (schemas, API contracts, tool descriptions) so the AI can traverse digital “spaces” and compose results.
- **Make temporality first-class:** Preserve ordering, windowing, and timestamp signals so the AI can detect progressions and regime shifts.

- **Leverage anomaly cues:** Invite the AI to surface outliers and discontinuities as focal narrative events (e.g., “flag unexpected trend breaks and propose checks”).
- **Shape agency by instruction:** Encourage clarifying questions, tool invocation, and revision loops; bound initiative with explicit guardrails and escalation points.[10](#) [11](#)

Illustrative prompts (adaptable)

- **System-oriented:** “Survey your available tools and sources. Choose and justify a workflow to analyze this dataset, then execute the first two steps and report outcomes and next options.”
- **Narrative-oriented:** “Integrate these sources. Map their intersections, sequence key events over time, and highlight anomalies that may alter the interpretation.”
- **Agency-oriented:** “Start broad, then propose two deep-dive paths. Ask for one clarification that would most improve the next step, and proceed once answered.”

Notes on evaluation

Evaluate presence separately from immersion. For [immersion](#), assess (a) *system* readiness (tools/data fidelity and access), (b) *narrative* integration quality (cross-source relations, temporal reasoning, anomaly handling), and (c) *agency* behaviors (initiative, clarification seeking, revision, consequence awareness).[2](#) [3](#) [5](#) [8](#) [16](#)

Attribution

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