

Exploring Large Audiovisual Archives through Embodied Experiences in Immersive Environments

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Table of Contents

- **Introduction**
- The Need for a New Framework
- Towards Immersive Generosity
- Embodied Understanding in IES
- The Emergence of Narrative
- Conclusion

Introduction

In his book *Zen and the Art of Motorcycle Maintenance*, Robert Pirsig outlines the differences felt when traveling in a car or on a motorcycle [16]. In the first case, the driver is only seeing the environment through the car windows, while in the latter **the motorcyclist is living, feeling that same environment**. It is a much **more embodied experience**.



Introduction

In a similar way, my research aims at proposing an **innovative framework to explore large audiovisual archives**, employing Immersive Environments to reach an idea of **immersive generosity** and **embodied understanding**.

Table of Contents

- Introduction
- **The Need for a New Framework**
- Towards Immersive Generosity
- Embodied Understanding in IES
- The Emergence of Narrative
- Conclusion

The Need for a New Framework

A Need Highlighted by DH and GLAM sectors Communities

- In 2014, **80% of EU cultural institutions had digitized their collections**, according to a survey conducted on 1200 institutions [4]
- Increase in **digitization of audiovisual archives** (BBC, 1M hours [21]; RaiTeche, 1.3M hours [17])
- Archival scholars have **called for innovative frameworks** to explore such collections, that go beyond the classical screening of a few films [5]

The Need for a New Framework

The Issues with Traditional Information Retrieval

- Often based on classification and tagging, that **rely on prior assumptions and respond to different needs** [14]
- **Visual features** of videos are **harder to verbally capture**
- **IR presupposes a specific question to answer**, something that visitors in a museum might not have [13, 14]

Table of Contents

- Introduction
- The Need for a New Framework
- **Towards Immersive Generosity**
- Embodied Understanding in IES
- The Emergence of Narrative
- Conclusion

Towards Immersive Generosity

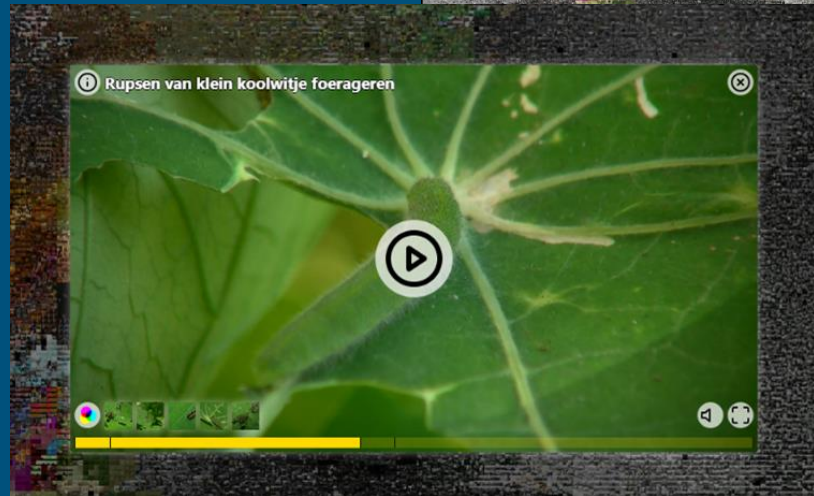
The Concept of Generous Interfaces

- Introduced by Whitelaw in 2015, he argues that **searching requires 'rich, browsable interfaces** that reveal the scale and complexity of digital heritage collections' [20]
- Rely on **more humanistic approach of browsing** rather than visualisation mantra proposed by Shneiderman, 'highly mechanistic' according to humanist scholar Johanna Drucker [3]

Towards Immersive Generosity

The Sensory Moving Image Archive

- Developed in 2019 at the University of Amsterdam [10]
- Web interface to explore 103,273 shots according to four visual features (color, shape, movement and clutter)
- Shots spatially distributed according to similarity of these four features



Towards Immersive Generosity

Augmenting Generous Interfaces with Immersive Visual Storytelling

- Generous interfaces are **mostly restrained to the web**
- Good for access and democratisation of culture, but **lack immersion and engagement** in museum spaces
- Porting generous interfaces to Immersive Environments (IEs) could **augment public engagement** with audiovisual archives in museum spaces, thanks to the idea of '**embodied understanding**' [7]
- This will change how narrative emerges, especially for interactive platforms

Table of Contents

- Introduction
- The Need for a New Framework
- Towards Immersive Generosity
- **Embodied Understanding in IES**
- The Emergence of Narrative
- Conclusion

Embodiment in IEs

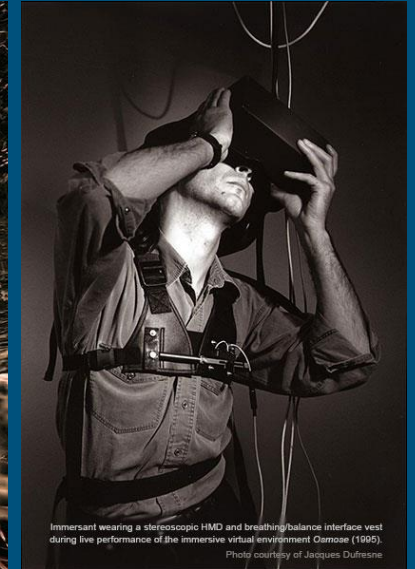
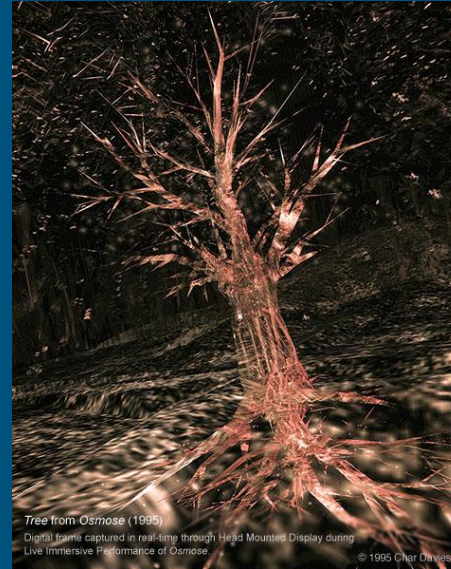
The concept of 'embodied understanding'

- Proposed by philosopher Mark Johnson, according to whom '**understanding is profoundly embodied**, insofar as our conceptualization and reasoning recruit sensory, motor, and affective patterns and processes to structure our understanding of, and engagement with, our world' [7]
- **Role of emotions** in our survival and well-being, as well as in storytelling practices
- Five '**bodily sources of meaning**' to fully appreciate our 'embodied understanding' [6]

Embodiment in IEs

The Biological Body

- Our bodies are first **'flesh-and-blood'**, 'functioning biological organism[s] that can perceive, move within, respond to, and transform [their] environments' [2]
- In **continuous balance with environment** to find optimal well-being



Osmose (1995), Char Davies

Embodiment in IEs

The Phenomenological Body

- Our '**tactile-kinaesthetic body**' depends on our feeling of bodily posture and orientation, our kinaesthetic sensations and our awareness of our body states through emotions and feelings
- Physical interactions mapped to abstract operations on the data ('**tangialities**' [12])



Surprise Machines (2021), Harvard metaLab

Embodiment in IEs

The Ecological Body

- Continuous process between our bodies and the environment we evolve within
- Omnidirectional nature of large IEs allows for both allocentric and egocentric cognition and spatial perspectives simultaneously [11]

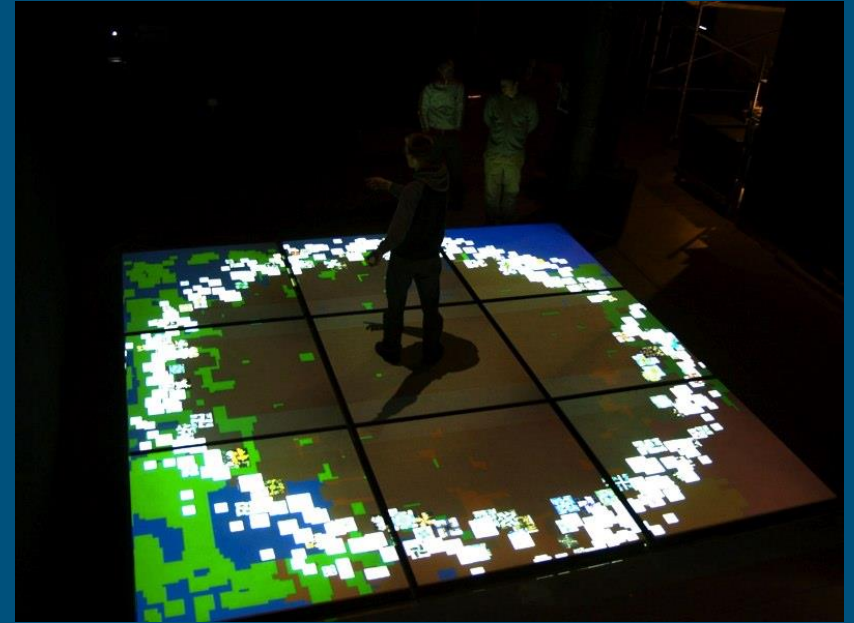


The Living Web (2002), Christa Sommerer and Laurent Mignonneau

Embodiment in IEs

The Social Body

- Our environment is also composed of human relationships
- Role of the user-agent in interactive experience, creating a performance for the other visitors
- Geert Mul's 'third-person's perspective' [13]



Library of Babel (2003), Geert Mul

Embodiment in IEs

The Cultural Body

- Role of cultural practices in the way we shape and understand our bodies
- Interpretative action of the viewer draws on their culturally-different prior assumptions and knowledge
- Users' cultures become new variables in the process of generating narrative



HampiLIVE (2010), Sarah Kenderdine

The Emergence of Narrative

The Effect of the Medium on the Narrative

- Aylett and Louchart [1] propose **four dimensions to characterize narrative**:
 - Contingency
 - Presence
 - Interactivity
 - Narrative Representation
- Immersive Visual Storytelling has strong contingency, presence and interactivity (for interactive interfaces)
- The narrative representation places the viewers inside the collection

The Emergence of Narrative

The Authorial Power of Users in Interactive Immersive Installations

- In immersive and interactive multi-user systems, the **user-agent drives the narrative** for the rest of the audience
- User-agent is **placed as actor in the experience** rather than passive viewer
- **Benefits** in the understanding of knowledge **according to constructionist theories** when users **actively engage** with information [2, 15]

Table of Contents

- Introduction
- The Need for a New Framework
- Towards Immersive Generosity
- Embodied Understanding in IES
- The Emergence of Narrative
- **Conclusion**

Conclusion

Audiovisual archives need **immersive generous interfaces** to be explored in a meaningful way, letting users drive their own experience. This paradigm will result in a more **embodied understanding** and the **emergence of narrative**. It will reinvent our access to this kind of collections through a **creative performance** witnessed by other visitors in the space, placing users as actors in the experience rather than mere spectators.

Acknowledgements

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See <https://www.futurecinema.live/> for more information on the project.



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