
Nested Cinema co-creation:

**Advancing female inclusion through
immersive experience innovation
and storytelling.**

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NESTED CINEMA

AIMS:

- Orchestrate smart technology and devices across multiple nested layers of experience
- Test the potential for emergent narrative through spatializing the cinematic form into an immersive experience

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THE ORCHESTRATION OF SMART TECHNOLOGY

Multi-Screen Technology

Surround Sound

VR

IOT Lighting

Isadora

The expansion of film narrative
beyond the frame and the nesting of
the narrative within the viewing
space through the combination of
these technologies and expanded
Production Design.

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SPATIALIZING NARRATIVE THROUGH NEW TECHNOLOGY

Nested Cinema builds on the tradition of cinematic viewing experience rather than the theatrical by placing the participant in a more stationary position in relation to the spatialized film content.



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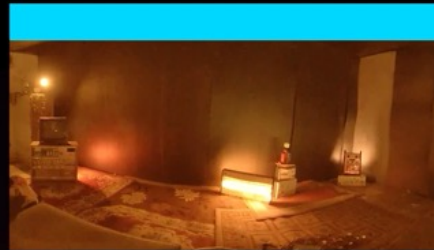
SPATIALIZING NARRATIVE THROUGH NEW TECHNOLOGY



Nested Cinema creates a physical world that connects to the wider film narrative displayed on 2D screens, and expands this world into VR, recreating a *nested* version of the physical space in VR, and thus disrupting the temporal flow of the narrative

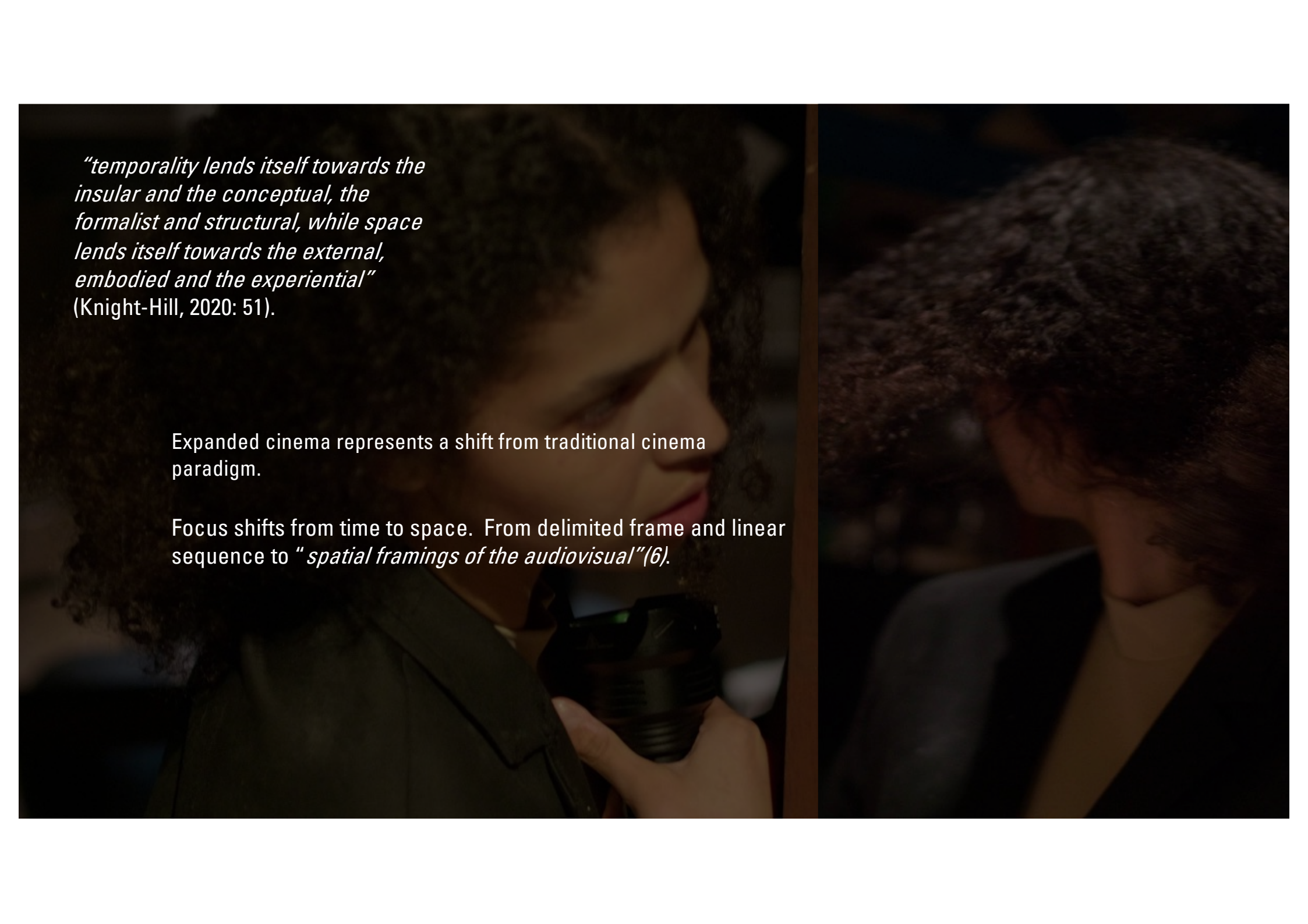
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SPATIALIZING NARRATIVE THROUGH NEW TECHNOLOGY



This offers participants the opportunity to choose, at critical plot-points, how they view the film rather than what will happen in the film – shifting narrative trajectory in relation to their embodied positioning and perspective

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The image is a vertical split-screen composition. The left panel shows a woman with curly hair in profile, looking down and holding a camera. The right panel shows the same woman from a slightly different angle, also looking down. The overall tone is dark and moody.

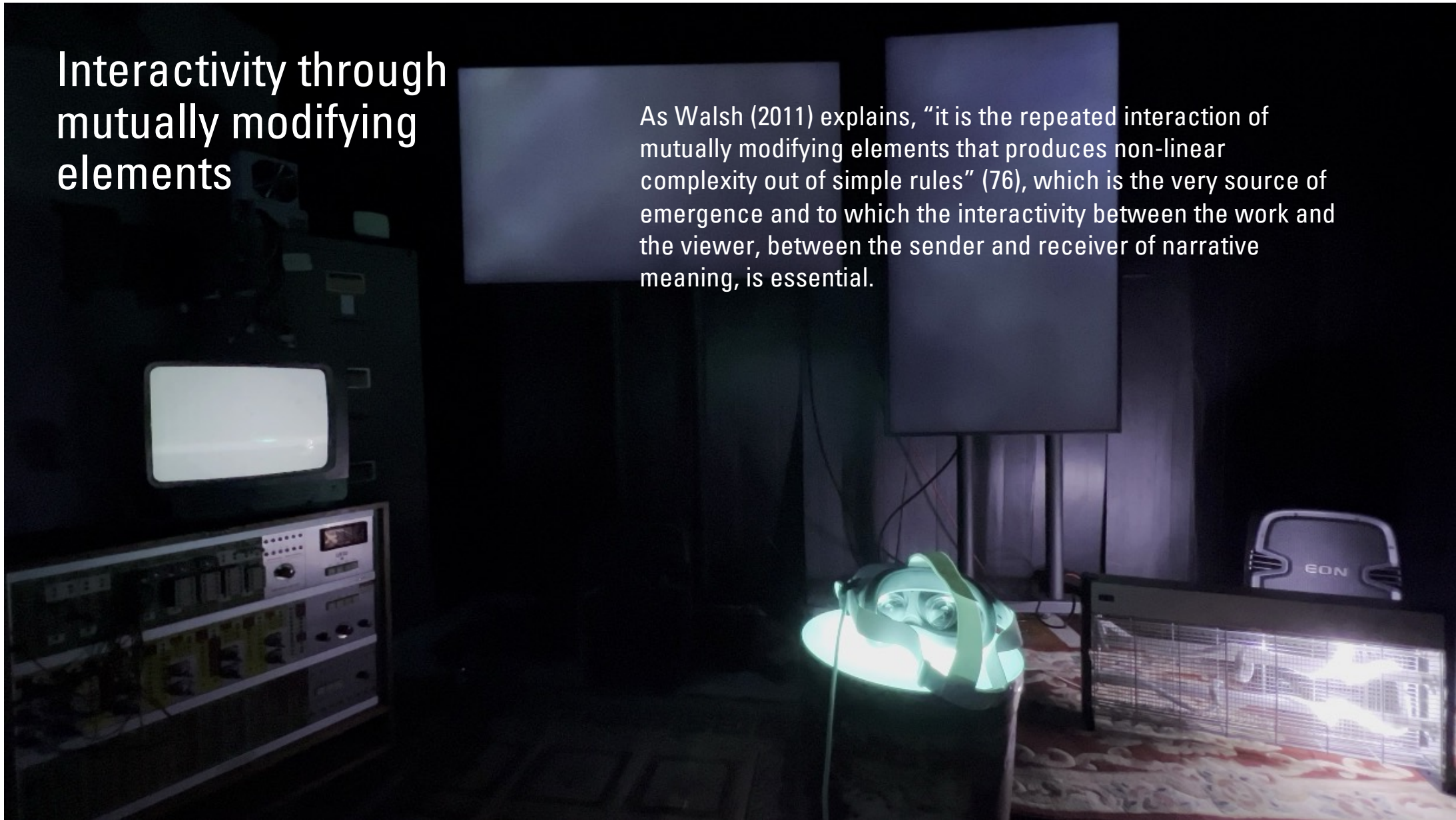
"temporality lends itself towards the insular and the conceptual, the formalist and structural, while space lends itself towards the external, embodied and the experiential"
(Knight-Hill, 2020: 51).

Expanded cinema represents a shift from traditional cinema paradigm.

Focus shifts from time to space. From delimited frame and linear sequence to *"spatial framings of the audiovisual"*(6).

Interactivity through mutually modifying elements

As Walsh (2011) explains, “it is the repeated interaction of mutually modifying elements that produces non-linear complexity out of simple rules” (76), which is the very source of emergence and to which the interactivity between the work and the viewer, between the sender and receiver of narrative meaning, is essential.



VR 360 Viewpoint



Vertical Screen



Horizontal Screen



Simultaneous-spatial
nesting

Physical Participant Space



VERA'S NOT A

Nested Cinema Version 1.0
All rights reserved

Sequential-spatial
nesting

VERA'S NOT ALONE_

Horizontal Screen

Vertical Screen

NESTED CINEMA: VERA'S not ALONE

EXHIBITION JUNE 2023

MediaCityUK

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Participation & Results

100+

PARTICIPANTS

81

COMPLETED ONLINE
QUESTIONNAIRES

44

INTERVIEWS
CONDUCTED



91%

Viewing experience was made more immersive by seeing the content on multiple screens side-by-side.

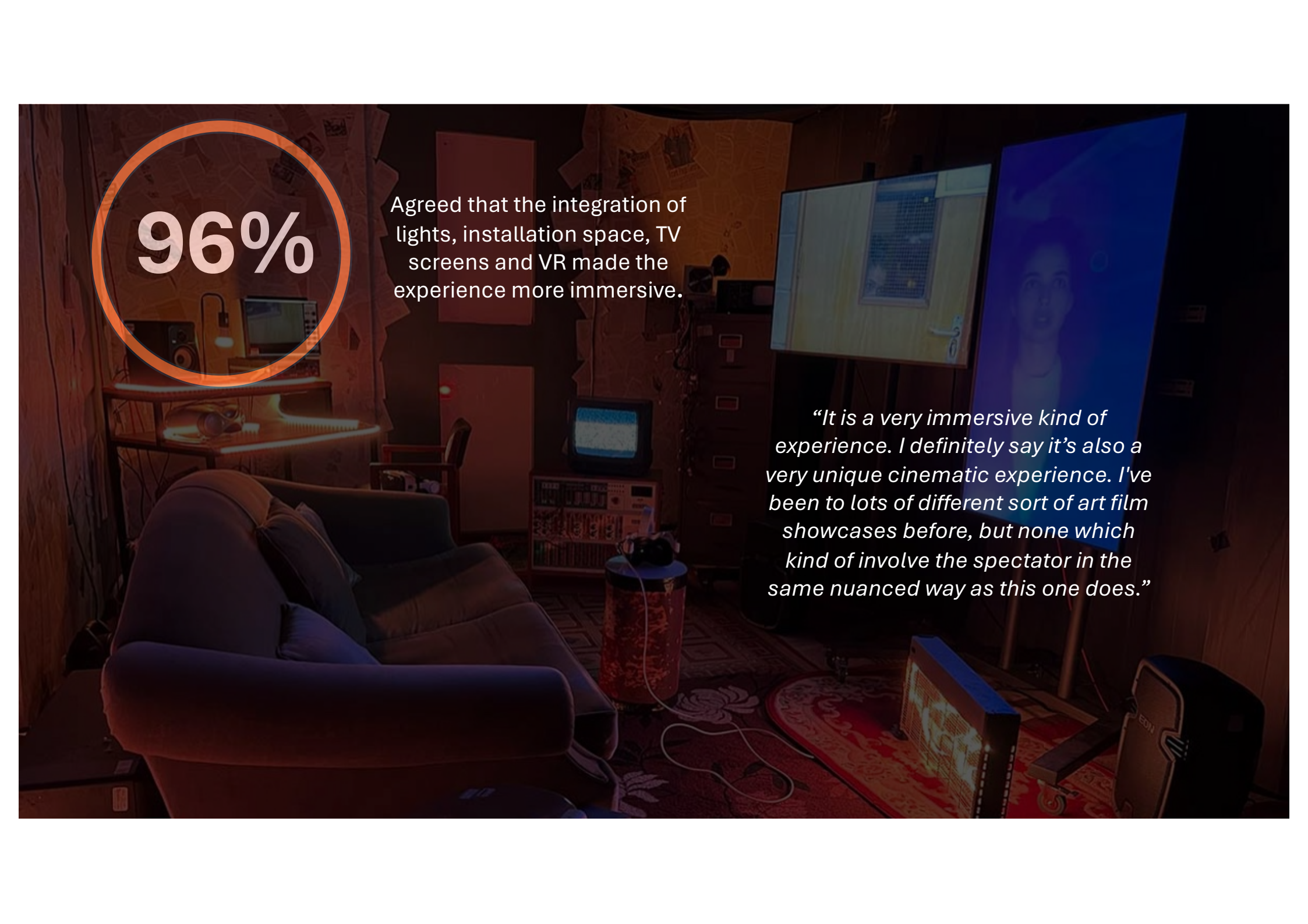
65%

Asserted that their experience was made more immersive by being able to see portions of the film in the VR headset.

13%

Did not use or engage with the VR headset at all.

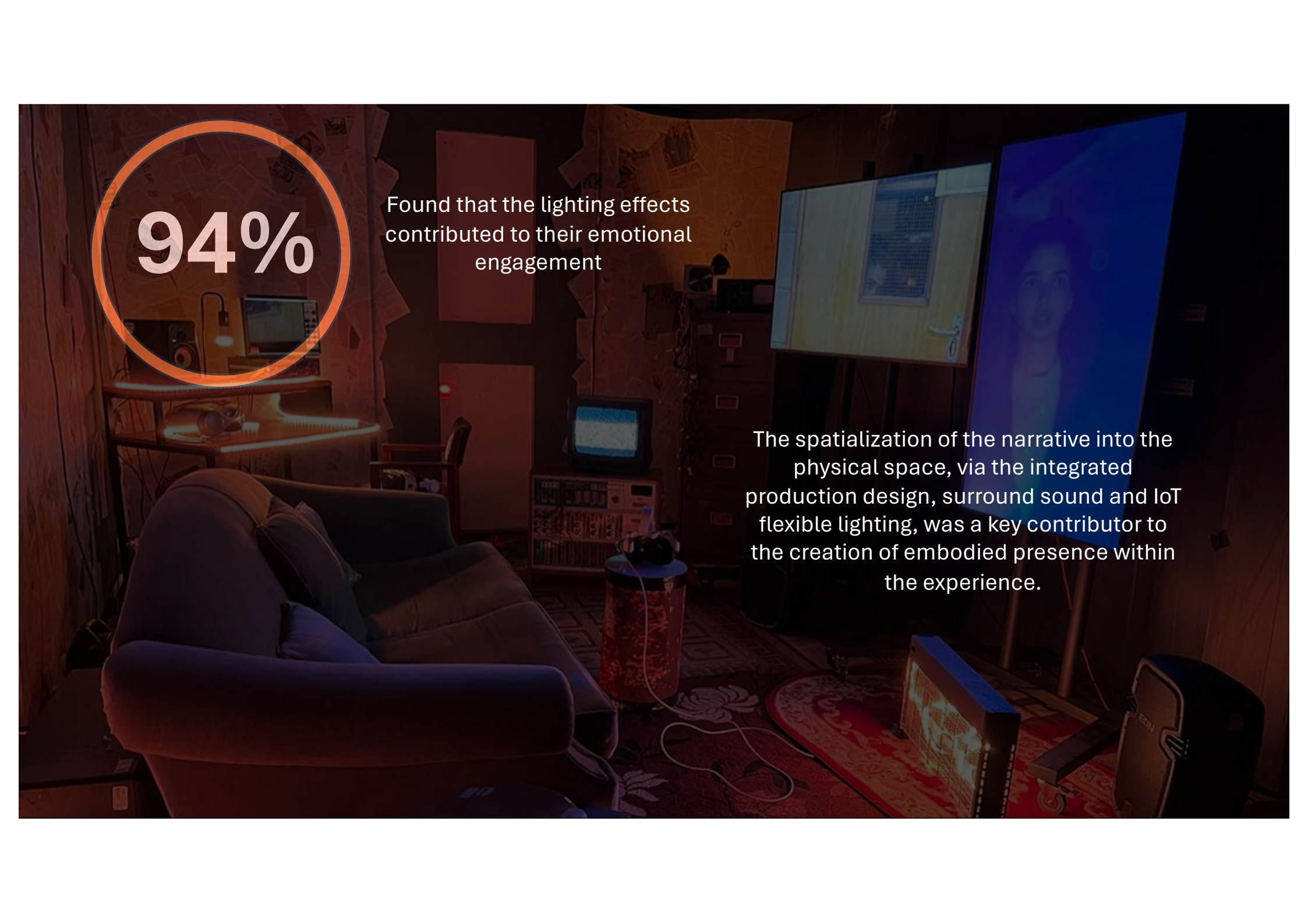
“While it was going on, looking from screen to screen, I felt like I was editing the film. So, I felt very interactive with the process.”



96%

Agreed that the integration of lights, installation space, TV screens and VR made the experience more immersive.

“It is a very immersive kind of experience. I definitely say it’s also a very unique cinematic experience. I’ve been to lots of different sort of art film showcases before, but none which kind of involve the spectator in the same nuanced way as this one does.”



94%

Found that the lighting effects contributed to their emotional engagement

The spatialization of the narrative into the physical space, via the integrated production design, surround sound and IoT flexible lighting, was a key contributor to the creation of embodied presence within the experience.

NESTED CINEMA

Future Publication: IFM Journal

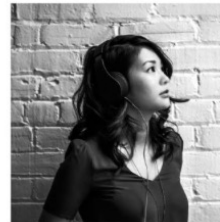
*The interactive potential of emergent narrative through
spatial nesting of the cinematic experience*

(Prokopic, P & Sayer, J)

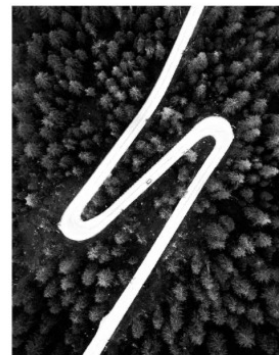
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INTER- ACTIVE



FILM & MEDIA

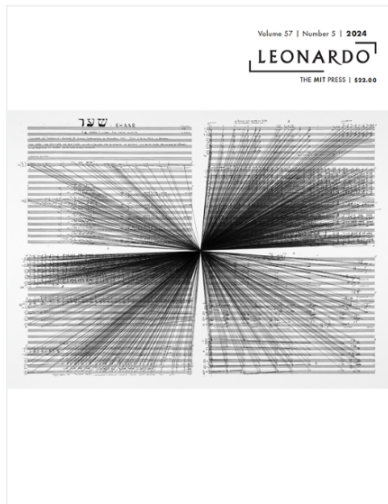


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Nested Cinema: An Immersive Fiction-Film Experience

Pavel Prokopic

[> Author and Article Information](#)*Leonardo* (2024) 57 (5): 502–508.https://doi.org/10.1162/leon_a_02538[Article history](#) [Cite](#) [Permissions](#) [Share](#) ▾ [Views](#) ▾**Abstract**

Nested Cinema is an original immersive experience that complicates the boundaries between the physical and the virtual, between the real and the imaginary. Nested Cinema reimagines film through the orchestration of technology across three distinct layers of experience – traditional screens, the installation space, and cinematic virtual reality – giving rise to a new immersive mode of dramatic fiction and expanded cinema. By combining established and emerging production and presentation technologies, the project explores the narrative and atmospheric effects of a nested multimodal environment, as well as new modes of visitor engagement and novel audiovisual expression and communication.

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Introduction

The impact of new cinema technologies on industry and the future of female representation.

- **An Evolving Film Industry**
Virtual Production, Immersive Experiences, New Cinema Environment
- **The Convergence of the Computing & Film Sectors**
IT, software and computing sector 39.6% GVA vs Film, TV, Radio and photography 17.1% GVA
- **Female Representation in UK Creative Industries**
Under-represented in technical roles in Film & TV Sector (Creative Skillset, 2012) and below 18% in Computing Sector



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AIM

To co-create a growth mindset with female creatives in technical environments, through PRACTICE AS RESEARCH approaches.

- To develop and increase participants knowledge and understanding of new cinema technologies
- To develop the technical confidence of participants with new cinema technologies
- To investigate and evaluate teaching and learning approaches that encourage growth mindsets.
- To showcase and platform female creative technical work in the new cinema technologies space.
- To widen the participation of female creatives with new cinema technologies and new cinema research.

CHALLENGES

TO FEMALE ENGAGEMENT WITH TECHNICAL AND TECHNOLOGICAL PATHWAYS

- **Reinforced stereotypes**
How are these formed and how representative are they of current female creative students?
- **Class size and the creation of competition**
How might classroom dynamics in technical teaching impact female creatives?
- **The approach to teaching technical skills**
How does the teaching of technical knowledge and development engage female creatives?

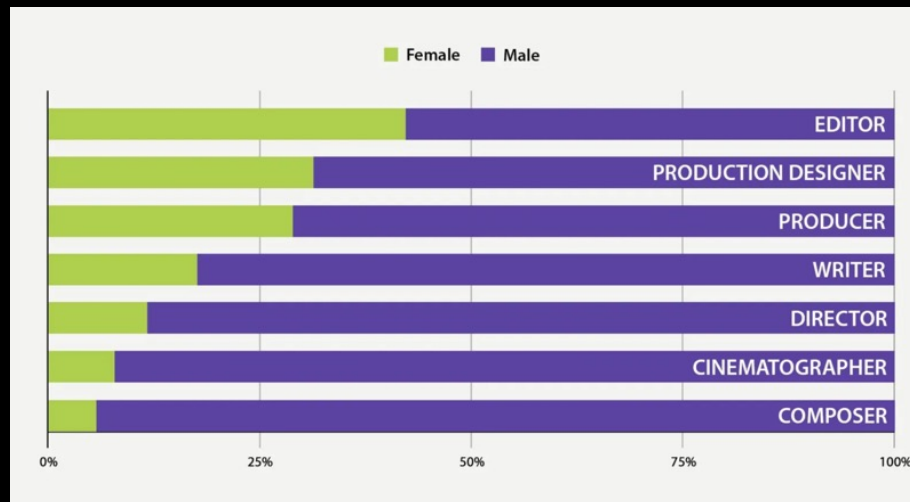


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Reinforced stereotypes

How are these formed?

- The reporting of low representation of female creatives in industry technical roles.



Miriam Quick: [The data that reveals the film industry's 'woman problem'](#) - BBC Culture

	Permanent	Freelance	Female	Male	Disabled
All Occupations	70	30	49	50	5
• Production	66	34	56	43	6
• Business Management	89	11	68	30	5
• Strategic Management	65	35	51	48	5
• Art and Design	78	22	37	62	3
• Broadcast Engineering & Transmission	85	15	20	78	16
• Editing	49	51	40	56	2
• Animators	70	30	20	79	3
• Distribution, Sales & Marketing	90	10	56	40	1
• Content Development	86	14	35	65	7
• Audio, Sound, Music	33	67	24	76	8
• Camera/Photography	23	77	14	84	5
• Broadcast Management	95	5	65	35	3
• Creative Development	56	44	49	50	5

Occupation data for the workforce survey is derived from the Creative Skillset (2012) Employment Census of the Creative Media Industries

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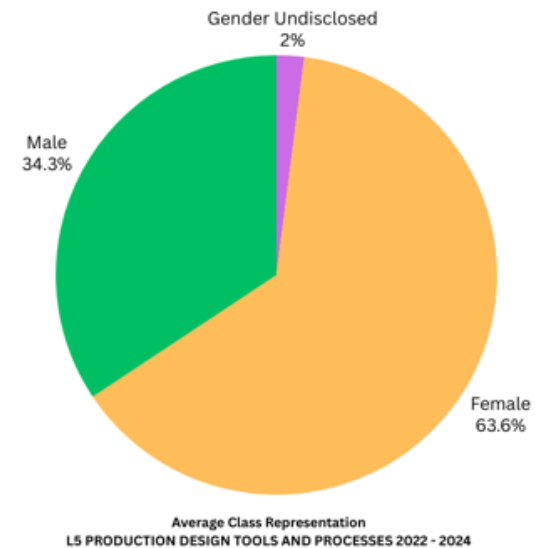
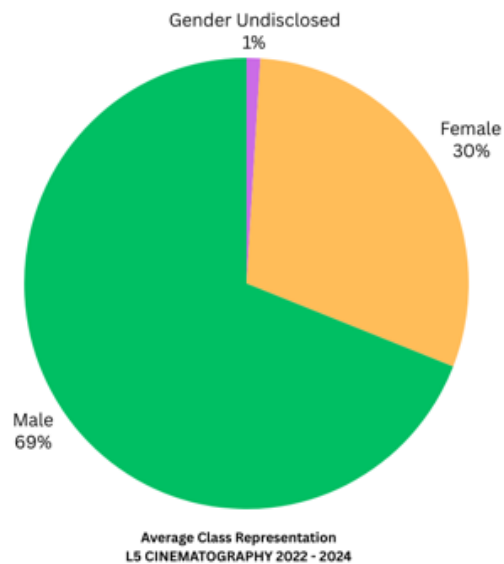
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Reinforced stereotypes

How are these formed?

- The over-representation of male vs female ratios in production or technical classes

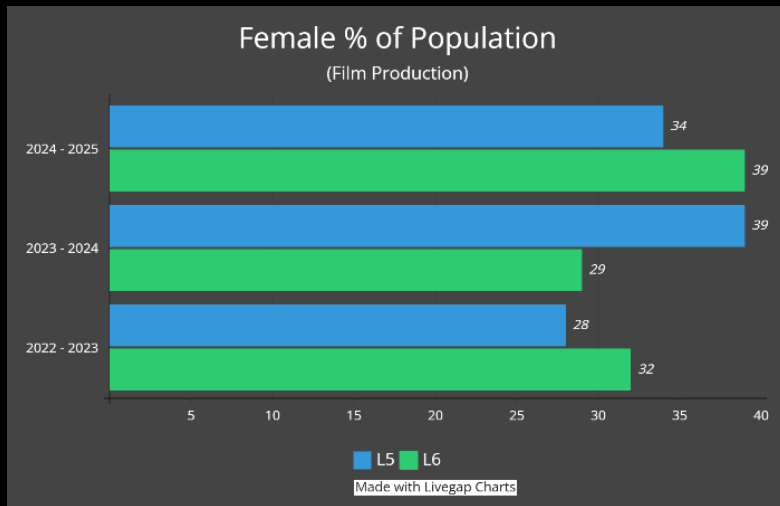


University of Salford Progression

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Reinforced stereotypes

are they of current female creative students?



- A contradictory narrative of female preferences?

YEAR	L5 TOP 5 FEMALE CHOICES (%)	L6 TOP 5 FEMALE CHOICES
2022	Scriptwriting for Film (56%) Cinematography (51%) Producing & Directing (49%) Production Design (45%) Professional Film Practice (40%)	Film Marketing & Distribution (36%) Advanced Scriptwriting (26%) Advanced Production Design (23%) Advanced Editing (23%) Directing Fiction (21%)
2023	Cinematography (53%) Production Design (48%) Scriptwriting for Film (47%) Personal & Independent Filmmaking (47%) Directing (39%)	Advanced Production Design (37%) Lighting for Camera (31%) Advanced Scriptwriting (27%) Directing Fiction (25%) Advanced Editing (23%)
2024	Cinematography (44%) Scriptwriting for Film (44%) Personal & Independent Filmmaking (44%) Directing (42%) Production Design (41%)	Lighting for Camera (33%) Advanced Production Design (31%) Advanced Scriptwriting (27%) Film Marketing & Distribution (26%) Advanced Editing (19%)

Class size and the creation of competition

How might classroom dynamics in technical teaching impact female creatives?

- Competitive environment creates an increased focus on final performance goals rather than learning and progress.
- Industry context sometimes used to justify this level of competition, restricting student's career ambitions.
- Controlled or fixed roles on set or in production environments creating unpleasant or less desirable experiences.

'I feel that they (the male students) are more confident with the tech and in production classes take control of the equipment more'.

'There are so many students wanting to be DoP's and Directors, I just don't think that any group I work with will let me take those roles'.

*Female Film production students
(comments made in co-creation sessions)*



Approach to teaching technical skills

How does the teaching of technical knowledge and development engage female creatives?

- A focus on assessment of knowledge and understanding of technical processes
- A lot of information in a short amount of time
- Scaffolding approach rather than differentiation

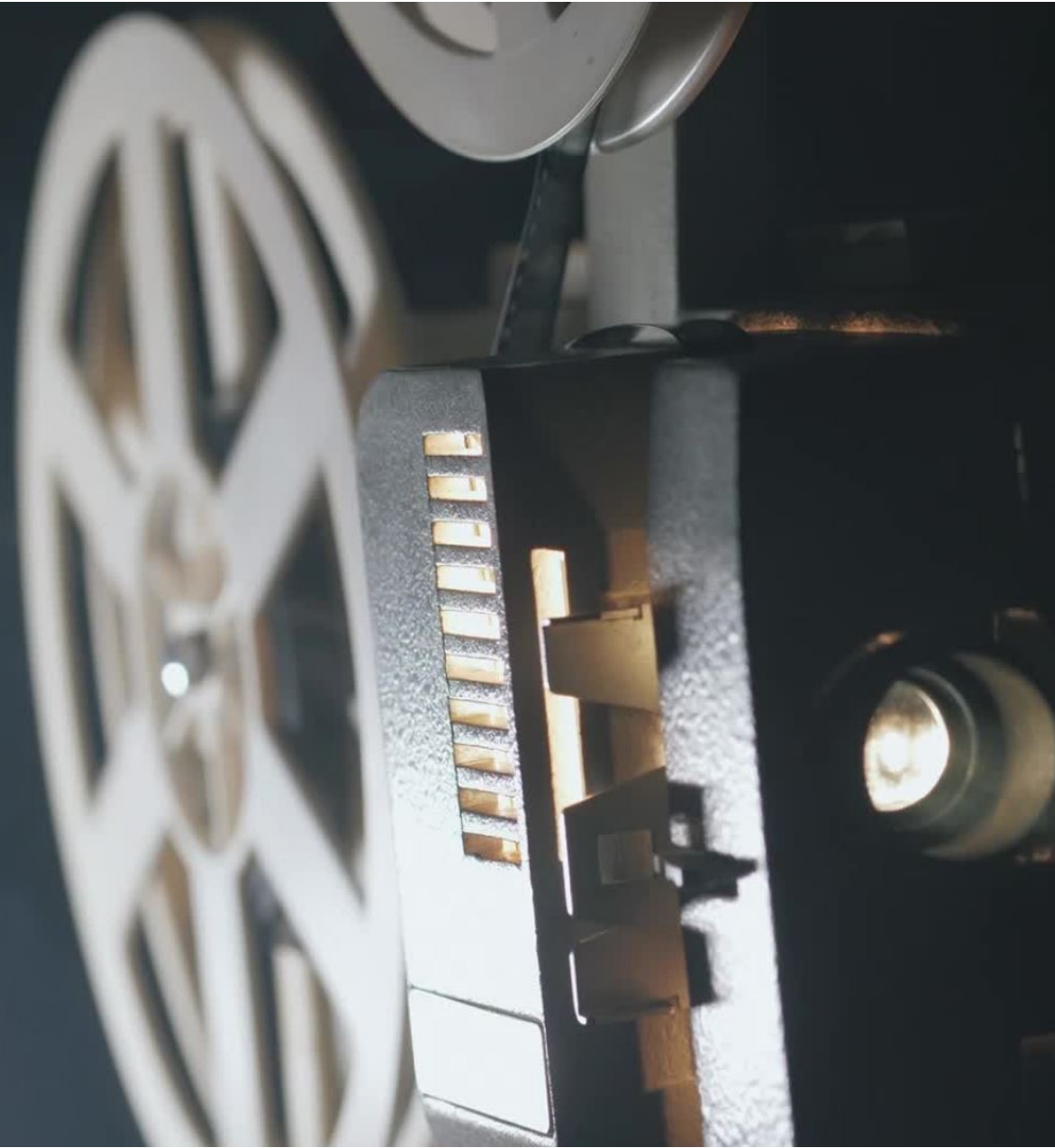
'I find the technical stuff less interesting when its focused just on the kit'

'The amount of things to remember and being shown (in production classes) can be overwhelming'

*Female Film production students
(comments made in co-creation sessions)*

Could fixed mindsets be contributing to the choices and engagement of female creatives in technical and technological spaces?

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MINDSET

Fixed and growth mindset as established by Dr Carol Dweck refers to the way in which individuals see themselves and their abilities, and how these impact on their ability to learn or develop a higher level of skill or potential for s

CREATIVE

TECHNICAL

LOGISTICAL

Fixed mindsets can result in the avoidance of learning in relation to specific subjects or the belief that skills and talent are a natural phenomenon rather than a combination of ability and effort.

This can often, in educational environments be linked to grades and attainment goals.

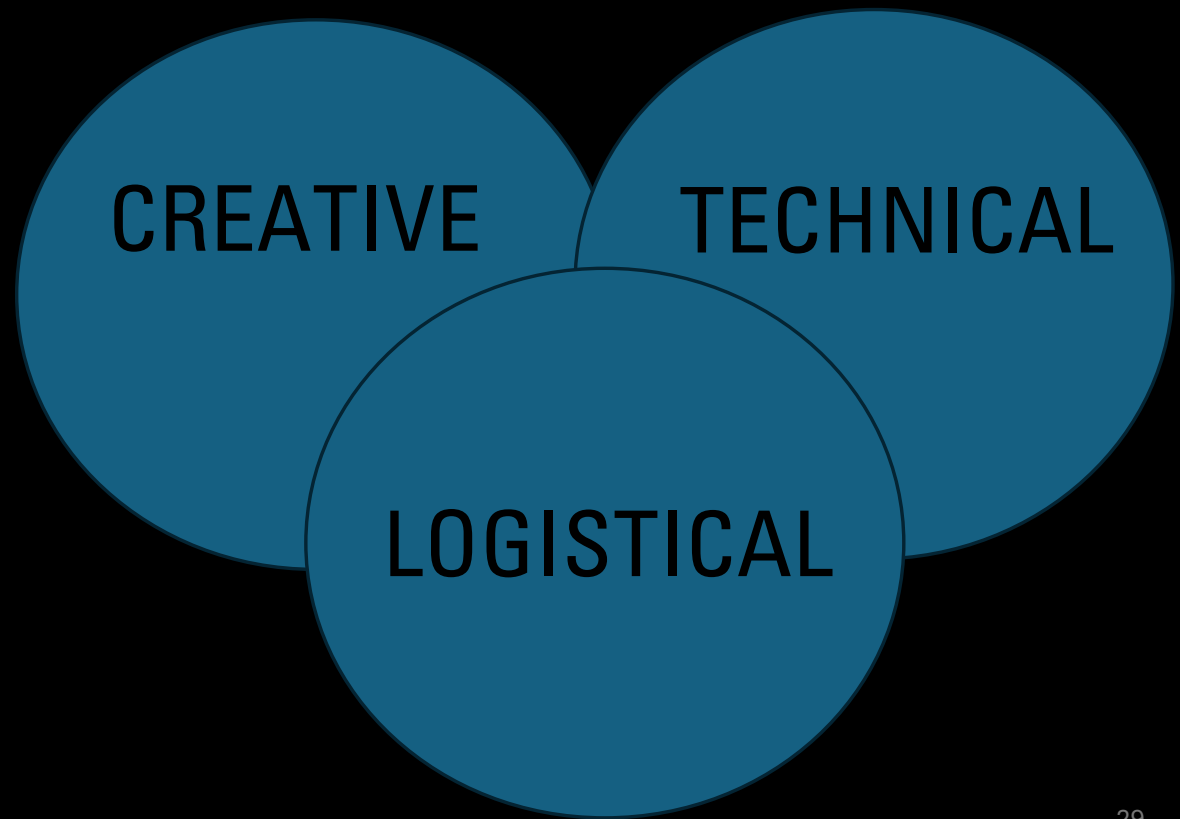
MINDSET

(Dweck, 2017)

'In one world – the world of fixed traits - success is about proving your smart or talented. Validating yourself. In the other – the world of changing qualities – it's about stretching yourself to learn something new'.(Dweck, 2017).

Those positioned in a growth mindset are more likely to recognise incremental progress through effort and view skills and abilities as something that can be developed rather than feared or an innate talent.

Those positioned within a growth mindset are also more likely to engage with challenge and see problem solving or practice as a positive experience,



A dimly lit room, possibly a home office or a small cinema. In the foreground, a dark-colored sofa is visible. To the left, a desk with a computer monitor and a lamp is partially illuminated. The walls are covered with numerous small, light-colored papers or photographs. In the center, a small television sits on a wooden stand. To the right, a large screen displays a woman's face. The overall atmosphere is quiet and focused.

Strategy, resilience, support and desire are just as important as effort.

Dweck, 2017

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The background image is a dimly lit room, possibly a home office or a creative studio. In the foreground, there is a dark-colored sofa. To the left, a desk holds a computer monitor and various electronic equipment. In the center, a small television sits on a stand. To the right, a large screen displays a close-up of a woman's face. The walls are covered with numerous papers, photos, and notes, creating a cluttered and creative atmosphere.

PRACTICE AS RESEARCH & IMMERSIVE CINEMA TECHNOLOGY

How can a practice as research approach help foster growth mindsets in female creatives?

- **IMPACT:** The platforming of female creatives new cinema work to challenge existing stereotypes.
- **METHOD:** A focus on discovery and experimentation rather than assessed creative and technical outcomes.
- **KNOWLEDGE GENERATION:** Driving technical learning by centering the creative.

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The platforming of female creatives' new cinema work to challenge existing stereotypes



Exhibition of work to peers and wider community

Exposing female creatives to a female centred technical environment

Allowing female creatives to create work that may or may not connect to their gender

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A focus on discovery and experimentation rather than assessed LOGISTICAL, creative OR technical outcomes

The removal of formal summative assessment for the final creative work.

Introduction of tasks and activities which encourage support and collaboration.

The availability of student-centered goal-setting and opportunity for incremental positive progress.

'In one world – the world of fixed traits - success is about proving your smart or talented. Validating yourself. In the other – the world of changing qualities – it's about stretching yourself to learn something new'.

(Dweck 2017)

Driving technical learning by centering the creative

Group discussion and development sessions for ideas for projects.

Designing projects by creative ambition rather than existing technical knowledge.

Encouraging the application of creativity to problem solving technical challenges by developing new strategies and approaches.

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POTENTIAL CONTRIBUTIONS TO NESTED CINEMA RESEARCH

The utilisation of the set and technology as a research lab widens its original impact

The creative projects in development contribute to the creative and technical direction of Nested Cinema 2.0

The inclusion of students within an existing research project fosters an appreciation and engagement with academic research

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THANK YOU

The background image is a dimly lit room, possibly a home office or a VR setup. On the left, there's a desk with a computer monitor and some papers. In the center, a large screen displays a person's face. To the right, a couch is visible. The room is cluttered with papers and equipment, creating a sense of a lived-in space.

A VR version of the original 'Nested Cinema: Vera's not Alone' project is available to view, please do ask us should you wish to see it.

We welcome further discussion and any questions either during the conference or in the future.

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