

VIP Treatment: Curiosity-Led Virtual Production Methodologies from an Innovation and Research-Driven Production Studio

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Abstract

This article synthesises and presents methodological lessons learned from the Virtual and Immersive Production (VIP) Studio, a research and innovation hub founded by our interdisciplinary team at the University of Nottingham in 2023. The studio supports a range of researchers, artists, small and medium-sized enterprises (SMEs), creatives, and community groups to develop unique immersive experiences in film, TV, games, performance arts production, and audience engagement. Projects include immersive theatre experiences, interactive AR applications, mixed media gaming experiences, digital twin performances, VR training applications, volumetric video dance and circus experiences, audio augmented photography, projection mapping, holograms, and many more collaborations.

The practice-led methodologies emerging at the VIP Studio are inflected by the particularities of the facility, its technical capabilities, our research priorities, and funding models. The VIP Studio returns part of an existing facility to its original usage as a purpose-built television studio, a sustainable production practice. At the VIP Studio we explore critical and creative applications of immersive and AI technologies, particularly in grassroots and lower-budget projects, where this can be done responsibly, becoming part of the industry toolset available to creative practitioners. We are constantly advocating for the innovation capacity and further potential in our region – the East Midlands, in England, United Kingdom. This advocacy specifically involves enhancing access to Virtual Production technologies through an agile, resource-light model grounded in feminist principles of inclusion, shared play, and the deliberate removal of barriers to participation. We term this ‘curiosity-led practice’: a methodology built on the conviction that familiarity, creativity, and confidence with technology are produced through play, through open-ended encounter, and through the consistent refusal to make prior expertise a condition of entry. A programme of four practice-as-research residencies from 2023-24 provides the primary evidence for what curiosity-led practice looks like and what it produces. We know there are other Virtual Production studios working in this way all over the world, and the aim of this article is to draw out insights, conditions, and commitments that can be examined, applied, and adapted within this growing network.

Introduction

There is a kind of knowledge that cannot be planned for in advance. It arrives through the body before it arrives through language, through the pleasure of an unexpected affordance, through the slight vertiginous sensation of handling a technology that does not yet know what you want from it and is not yet sure you know either. This is the kind of knowledge, built from practice-led research and curious experimentation, that has shaped the work and ethos of the Virtual and Immersive Production (VIP) Studio, a research and innovation hub founded by our interdisciplinary team at the University of Nottingham in 2023.

Susan Kozel, writing about the encounter between bodies and interactive digital systems in *Closer: Performance, Technologies, Phenomenology* (2008), describes this as knowledge that begins by listening to the senses and noting insights that arrive in the midst of doing, rather than prior to it. Her method, grounded in Merleau-Ponty's (2012) phenomenology of perception through lived embodiment, and developed through her own practice as a dancer and digital performance artist, insists that what cannot be accessed through prior description or instruction becomes accessible through movement, through the body's testing of what a system will allow and what it will resist. This is not a secondary or preparatory stage before real knowledge begins. It is the primary mode through which encounter with an interactive or immersive environment becomes meaningful.

This article synthesises and presents methodological lessons learned at the VIP Studio. As we mark the studio's third anniversary, this feels like a fitting moment to consolidate what that practice-led, body-first epistemology has actually produced: what it looks like when curiosity and sensory encounter become not just a research disposition but an institutional one, embedded in how a studio is designed, staffed, and run. Within this contemplation, it is important to understand the lineage from which the studio emerged, the underpinning factors which shape how it is envisaged and implemented.

Firstly, there is our longstanding commitment to interdisciplinary, collaborative research co-produced with creative and cultural industry partners. This is informed by the performance-led research in the wild approach pioneered at the Mixed Reality Lab through its work with artists such as Blast Theory (Benford et al., 2013). Foundational interdisciplinary expertise was enabled by Horizon Digital Economy Research, a centre bringing together technical, social and cultural perspectives to study the potential and challenges of innovation, thereby establishing career paths from doctoral training to project work and fellowships leading to academic roles. This is the framework that scaffolded members of the studio team (Tennent, Martindale and Ramchurn) and continues through Chavez Guerra's trajectory from an initial research residency to an embedded fellowship. It explains why the studio is a facility established by the Faculty of Arts but used by colleagues from across the university and run by a team that combines expertise in games studies,

human-computer interaction, audience research, filmmaking, interactive media, theatre and performance.

Alongside people, the physical space of the studio has a notable history, originating as a purpose-built television production facility that latterly became a university campus. Repurposing this valuable resource was a driving force behind establishing a new research and innovation hub, but this relied on evidence of demand. Such evidence was provided through our delivery of LEADD:NG (Live, Experiential and Digital Diversification: Nottingham), a business support programme from 2021-2023, which engaged more than 150 individuals and organisations, with 65 receiving at least 12 hours of direct support and 36 enabled to develop new services, products and experiences. LEADD:NG was conceived and led by Helen W. Kennedy, working in close collaboration with co-investigator Steve Benford, and drew on Kennedy's longer history of feminist, games-based, and practice-led research to shape a programme built around playful small-group prototyping, collaborative skills-sharing, and the deliberate removal of technical barriers to participation. This enabled those normally excluded from digital innovation to participate: 31% global majority, 63% female, 39% age 45 or above. The success of LEADD:NG served as proof of concept for a dedicated facility: a space in which that model of exploratory, inclusive R&D and knowledge exchange could be sustained and extended.

The studio supports a range of researchers, artists, small and medium-sized enterprises (SMEs), creatives, and community groups to develop unique experiences in across screen, performance arts, music and immersive interaction more broadly. In doing this we utilise a range of enabling technologies and technical expertise across motion capture, volumetric video, spatial audio, optical Pepper's Ghost and prism holography, generative AI, projection, green screen, VR and MR. In this article, we will use a programme of practice-as-research residencies, which the studio supported in 2023-24, as case studies to demonstrate how we cultivated our curiosity-led, process-over-outcome ethos. These residencies invited trans, non-binary folk and women who are currently under-represented as artists, practitioners, and researchers in immersive technology to engage with broad areas of enquiry around climate change, inclusion and new forms of online existence.

As we will show, the residency model produced the principles that animate and guide all studio activity. The practice-led methodologies emerging at the studio are inflected by its unique facility, its technical capabilities, its research priorities, its interdisciplinary personnel and its funding models, and also, critically, by a longer history of feminist, collaborative, and interventionist research that predates the studio's founding and shapes everything that happens within it.

The methodology at the heart of this article is 'curiosity-led practice'. The name requires unpacking, because curiosity here is not a neutral or universal disposition. Nor is it a disposition incidentally attributed to researchers who happen to find things interesting. Curiosity of the kind the studio cultivates is a politically produced condition. It is something designed into the structure of our encounters with creative practitioners: an affect cultivated, protected, and produced through specific forms of spatial arrangement, relational invitation, and deliberate, intentionally inclusive

practices, inviting our collaborators to experiment with technologies that are often inaccessible and protectively guarded. It requires active labour to bring into existence, because the default conditions of immersive technology culture systematically suppress it in particular bodies: in people who have been told, explicitly or structurally, that the equipment is not for them, that the expertise required to touch it is not theirs, that the space was designed with someone else in mind. Understanding what this means in practice, and why it matters theoretically and politically, is what this article seeks to establish.

That task is approached with a particular commitment: that the theory should emerge from the practice, not be applied to it from outside. The frameworks drawn on are ones that, when examined carefully, turn out to describe what the studio has been doing all along. Vossenberg's (2018) feminist frugal innovation framework gives us a way of understanding the studio's resource-light, community-facing, non-extractionist model as something more than a pragmatic response to institutional constraints: as a principled and politically coherent methodological position.

Susan Kozel's (2008) practice-phenomenology of bodies with digital systems gives us a way of taking seriously the fact that what happens in the studio happens, first and most fundamentally, in the flesh. Karen Barad's (2007) agential realism gives us language for the way in which the studio's curious space was not a container waiting to be filled with curiosity but was itself constituted through the intra-actions it hosted. And Seth Giddings's (2009) microethological approach to human-technology encounter gives us a way of attending to the distributed, non-anthropocentric agencies at work when bodies and machines meet without a predetermined agenda.

Feminist Frugal Innovation and Playful Encounter

The concept of frugal innovation arrived in our thinking not as a method the studio had adopted but as a description of something it had already become. Frugal innovation, as Vossenberg (2018) defines it, involves the redesign and simplification of products, services, or systems to make them available in resource-constrained environments without sacrificing user value. It is characterised by the minimisation of material and financial resources and by more polycentric, interactive innovation processes. Critically, however, Vossenberg's intervention is to insist that frugal innovation research has developed in a gender-unaware manner, treating its beneficiaries as a neutral, homogeneous category and thereby rendering invisible the systemic gender inequalities that shape who can participate in, benefit from, and be recognised as an innovator. The inclusiveness of frugal innovation, she argues, can only be determined through empirical data collected, conceptualised, and interpreted through a gender lens.

The VIP Studio's practice embodies precisely the kind of feminist inflection Vossenberg calls for, though it arrives at this position through a different route and in a different context. Rather than the techniques and markets of the Global South through which frugal innovation originated and

is typically theorised (Zeschky, Widenmayer and Gassman, 2011; Hossain, 2018), we operate in the creative industries of the East Midlands, a region with its own histories of underfunding, marginalisation from national cultural infrastructure, and gendered inequalities in who gets to participate in and be recognised as belonging to the world of immersive technology. The studio's frugality is not a byproduct of limited resources but an expression of a principled commitment to making the technologies we work with available without requiring the kind of prior technical competence that consistently functions as a barrier to entry for women and others marginalised in innovation discourse.

The frugal ethos was forged through the material inheritance of the LEADD:NG project, which launched before the the VIP Studio existed. This European Regional Development Fund (ERDF) programme had a specific regional focus on business support, with a very limited resource available within the budget for new hardware and software. Instead, we adopted a reverse engineering approach, looking at state of the art, premium systems and devising affordable, accessible and environmentally sympathetic ways to reproduce those techniques, borrowing facilities and resources from project partners where necessary. When the Faculty of Arts subsequently invested in dedicated production infrastructure, this ethos of frugality and the importance of sharing among networks of collaborators was already an established element of our practice.

Working with small-scale artists across Nottinghamshire and Derbyshire during the LEADD:NG project, to a budget calibrated to local Arts Council project norms rather than national studio rates, provided clear evidence that constraint was not an obstacle to quality work but a *generative* condition for it. Operating in a regional context, we were helping artists and creatives build things to work in local theatres and small galleries, drawing on a grassroots level of budget. This is the explicit line of inheritance from LEADD:NG into the studio's founding logic to find ingenious ways to innovate within budget and within spatial and technical limitations.

In Vossenberg's (2018) terms, the studio exemplifies inclusive frugal innovation practices, improving access to resources and opportunities within the market for emerging artists in the East Midlands and beyond. Although seemingly paradoxical, the studio has compensated its resource constraints through its social dynamics and a culture of reciprocal generosity. This *modus operandi* has placed gender, sustainability, and practices of care at the heart of its innovation.

As a space, it has become a vital steppingstone for emerging creatives and researchers, particularly women, by enabling them to network and build meaningful professional connections. It has brought together multidisciplinary talent, supported the development of grant-writing skills, and provided opportunities to develop and showcase creative work, even at the prototype or proof-of-concept stage.

What the studio shares with Vossenberg's (2018) framework, then, is a conviction that inclusiveness cannot be assumed from the design of an intervention but must be examined in terms of who

actually participates, under what conditions, with what kinds of support, and with what effects on their sense of agency and possibility. Vossenberg draws on pragmatic feminism's concept of "ends-in-view", the notion that women's empowerment and enhanced well-being are achievable, dynamic outcomes rather than utopian abstractions, and insists on the importance of attending to strategic gender needs: the need to alter power relations, challenge adverse norms, and create conditions in which women can shape the direction of their own creative and professional lives. These are precisely the outcomes our methodology has been oriented towards.

This feminist orientation is not new to the work documented here. It has a longer institutional and intellectual genealogy, rooted in the Creative Collaboratory Method (CCM).¹ The CCM is a framework comprising a formal set of principles and practices through which to facilitate meaningful, action-oriented multi-stakeholder collaborations (Kennedy, Atkinson and Wreyford, 2020). It evolved from a commitment to collaborative research conducted with stakeholders rather than on them, a co-laboratory ethos built into the original research design, and has been refined through a series of events, all-women game jams, and near-field immersive sector work with women in VR.

Grounded in feminist research principles, the CCM draws on Anne Stephens's (2013) adaptation of systemic intervention methodology, which asks researchers to adopt a gender-sensitive approach, value voices from the margins, and undertake actions that promote plural, desirable, and sustainable social change. The CCM is not simply a method for doing research. It is a method for doing it with and for the people most likely to be excluded from it. That ethos runs through everything that happens in the studio: the way participants are recruited, the way sessions are facilitated, the way success is understood.

The game jam tradition from which the CCM emerged is directly connected to the studio's current practice. The game jam format creates an informal creative space, time-bound and resource-bound, that invites rapid prototyping, collaborative skills-sharing, and iterative ideation (Kennedy, 2018). The key elements are the same ones that animate the studio's approach: rapid team formation across disciplinary lines, foregrounding of collaborative curiosity over individual competence, and the creation of conditions in which everyone has something to give regardless of technical background. Enabling such activity however, as LEADD:NG and CCM show does still require some technical infrastructure and expertise in the room - active participation is a necessary part of the process. One thing the VIP and its various programmes have done very effectively is to share and democratise that technical capability and expertise as much as possible, so that many of those who participate become experts themselves and in turn provide their expertise to future participants.

¹ Developed collaboratively with Professor Sarah Atkinson and Dr Natalie Wreyford through the five-year ReFiguring Innovation in Games (ReFiG) project.

Knowing Through the Body: The Studio as Apparatus

To understand the studio as a methodological proposition, it is necessary to understand it first as a physical and relational space whose arrangement is itself a form of argument about who belongs in creative technology practice and on what terms.

Kozel's (2008) practice-phenomenology offers a helpful account of what happens when a body encounters an interactive or immersive system without predetermined expertise. Working across telematics, motion capture, responsive architectures, and wearable computing, Kozel argues that knowledge of a digital system is first and fundamentally knowledge-through-the-body: pre-reflective, kinaesthetic, arrived at in the midst of doing rather than prior to it. Her Merleau-Ponty (2012) informed vocabulary of flesh, reversibility, and intercorporeality is routed through making and performing with systems, bringing it into direct and productive alignment with the studio's practice. The encounter between a body and a digital system is one in which both are dynamic, moving things in the world, and knowledge is produced through their reversible relation rather than being possessed in advance by either.

The 4E cognition framework (Newen, De Bruin, and Gallagher, 2018), drawing on the foundational work of Varela, Thompson, and Rosch (1991), gives a further vocabulary for this. The 4E approach holds that cognition is 'E'mbodied, 'E'nacted, 'E'mbedded, and 'E'xtended: not a process that happens inside the head and then drives behaviour, but a dynamic coupling between an organism and its environment. Applied to immersive technology encounter, this means that what someone learns about a VR environment, a volumetric capture system, or a holographic display cannot be separated from the specific bodily actions through which that learning occurs. The studio's deliberate cultivation of active, exploratory, low-stakes encounter with technology is, in these terms, not simply a pedagogical preference but a recognition that this is how embodied knowing works: it requires doing, touching, moving, trying, failing, and trying again.

The name for this mode of encounter is play. Play is not the opposite of serious inquiry. It is the condition under which familiarity, creativity, and confidence with technology are produced – particularly for people who have been given the most consistent messages that the technology is not for them. It is through play that curiosity becomes embodied, that the unfamiliar becomes navigable, and that the encounter with a new technology produces not anxiety but agency. This is why play is not incidental to curiosity-led practice but constitutive of it. Play, as Kennedy (2018) has argued in the context of feminist game jam methodology, is the affective condition under which collaborative curiosity and skill-sharing become possible across difference: it levels hierarchies of expertise, suspends the stakes of competence, and creates the conditions in which everyone has something to give.

In the studio, this disposition is not only cultivated in the people who come through the door – it is modelled by the team itself. The *mucking around* that characterises the studio’s relationship to its own technologies, the willingness to cobble things together, to try a technique with no particular outcome in mind, is itself a form of play: serious, purposeful, and generative precisely because it is not driven by a predetermined result. Encouraging that disposition in residents and collaborators – making it clear that the invitation to play is genuine, that nobody will be judged for not knowing, that the equipment is there to be handled and tested and occasionally broken, that others in the studio will be there to help, participate and be themselves fascinated and engaged – is one of the most consistent and deliberate things the studio does. It is what makes the space curious. And it is what makes curiosity-led practice, at its core, a practice of shared play.

Alongside this, Giddings’s (2009) microethological approach to human-technology encounter proposes that the proper object of study is not the human subject alone, nor the technological system alone, but the event constituted by their coming-together: what he calls a collusion of human and nonhuman part(icipant)s. Agency is distributed across bodies, hardware, software, spatial arrangements, facilitatory invitation, and the specific history of the session up to that moment. This is consistent with Barad’s (2007) account of the apparatus as co-constitutive of what becomes possible within any given encounter. The studio’s physical arrangement, its technological openness, its ethos of non-gatekeeping, and the explicit framing of the invitation to participate are all part of the apparatus. Together they do not simply create the conditions for curiosity. *They produce curiosity as a phenomenon.*

The dominant institutional model for engaging with immersive technology positions equipment as expensive, carefully protected, implicitly requiring proof of competence before access is granted. The studio inverts this. There is something like an anti-museum concept at work: the “look but don’t touch” of the conventional technology showcase is deliberately inverted, and the disposition cultivated is one in which the authority of the kit is suspended in favour of the authority of the body encountering it. The studio’s technology choices consistently ask what is the minimum necessary to make something genuinely possible, rather than what a well-resourced studio would consider the standard toolkit. To give a concrete example of this, the Vicon motion capture system in the studio was bought to provide good quality motion capture capabilities at the time out of reach for artists on standard project budgets. It is an infrastructural resource that is not subject to gatekeeping, has been extended with pipelines to more familiar software to reduce training requirements, and invites studio creators to ask what if we did this? This does not compromise quality but shape deliberate decisions about where to invest in shared capacity.

Once the infrastructure is available, what follows is a complex process of taking a technology into the body – making the capability of working with those things part of one’s subjectivity. When someone puts on a VR headset and cannot work out where their hands are going, there is a proper ontological, phenomenological, proprioceptive process happening in those moments: moment-by-moment recalibration of biomechanical expertise. This is exactly what Kozel (2008) describes: a

gradual incorporation of a new technological capability into the body's sense of itself in space, arriving through doing before it can be articulated through description. Once play is encouraged, it returns people to a kind of childlike state, a non-hierarchical lack of inhibition. The unfamiliarity of the technology – not having encountered it before, not knowing how it works – becomes an invitation to discover rather than a barrier to entry.

The studio's orientation towards technology is not an assertion of its innocence. Technologies are non-innocent: they come with politics, with histories of violence and extraction, with legacies that cannot simply be set aside. Acknowledging this is a consistent feature of the studio's practice. What is asserted is that it is possible to acknowledge all of this and then move forward in a more hopeful way. In Ben Anderson's account (2006), hope dwells in the region of the not-yet, always marked by indeterminacy and longing, a mode of becoming rather than a stable state. The optimism cultivated in the studio holds, as Anderson insists hope must, the condition of defeat precariously within itself. It acknowledges the non-innocence of the technologies while refusing to foreclose on *what might yet be made from and with them*.

Residencies: Curiosity-Led Practice in Action

This orientation formed the basis for the studio's residency programme, which invited ongoing enquiry into the critical and aesthetic potential of popular and emergent immersive technologies. As such it provides the richest evidence for what this curiosity-led methodology looks like in practice, and for the kinds of outcomes it produces. Four residencies are considered here, and we draw upon feedback shared with the studio team by the artists during and after the process in the form of interviews, presentations and written reports. Each project is distinct in its format, technologies, participants, and creative questions, but each residency exhibited the same fundamental structure: an orientation towards open-ended experimentation, an acceptance of accident and redirection as generative rather than problematic, and a facilitatory posture that consistently foregrounds the participant's curiosity over any predetermined agenda.

Marina Wainer: Tehuelche Cosmovisions, AI, and the Ethics of the Archive

Marina Wainer, a Paris-based multidisciplinary artist, came to work at the studio across three sustained weeks, separated by several months of remote collaboration. Her project, *Wor(L)ds – Words create Worlds*, began with an ethically serious premise and arrived, through curiosity-led exploration, at something both simpler and more complex than anything initially planned. The animating concern was the preservation and activation of the language, imagination, and mythic cosmovisions of the Tehuelche, a Patagonian indigenous community whose last native speaker had reportedly died in 2019 (Domingo, 2021), and whose primarily oral culture had left very little in the way of visual archive. Working alongside Silvia Llanquetrú, a descendant of a lineage of

indigenous chiefs and a recognised custodian of their history, and Sylvie Tissot, a creative technologist and AI developer, Marina explored how immersive technologies and AI might bring something of this language and its cosmologies back into public experience.

The creative journey took a number of forking paths, and it is in those forks that the studio's methodology is most clearly visible. In Giddings's (2009) terms, what unfolded was a series of events, each one constituted by the coming-together of particular bodies, particular technologies, particular spatial arrangements, and particular orientations of curiosity. No single agent authored the outcomes. While working with the studio team, Marina ventured outside the building and selected a little stone to scan using a 3D scanning app called Polycam². There was no particular intention in doing so, other than to try the technique.



Image 1a&1b These two images show Marina Wainer beginning her experiments with the stone.

² <https://poly.cam/>



Having generated the asset, the next step was to project it in the studio's prism hologram display. The detailed digital representation of a stone in this form served as a catalyst for deeply curious exploration of the creative possibilities.



Fig 2. Proof of concept of Marina Wainer's hologram of a rock.

This is the enacted dimension of 4E cognition (Varela, Thompson, and Rosch, 1991) in practice: knowledge arriving through action rather than prior to it, the body and the technology discovering together what is possible. The stone, through intra-action with the Polycam photogrammetry, the hologram, and the curious attention of the human participants, became something other than a stone: a nexus of possibility, a material participant in the emergence of new creative directions, and a source of reflections of material patrimony, either artifacts or natural elements highly observed, and respected, by many “pueblos originarios”. Matter, in Barad's (2007) account, is co-constitutive of what becomes possible, and this moment of the stone-becoming-hologram is an example of precisely this.

The genealogy of the hologram that became the centrepiece of Marina Wainer's installation can be traced through a sequence of earlier projects. Our experience is that technologies developed for one purpose are held in reserve until an artist can see a use for them. Initial systems for projecting recorded and remote human performers using a Pepper's Ghost hologram inspired the development of a prism hologram for 3D content. Alongside this, the studio team were also experimenting with creating 3D meshes. Marina's work found a use for these two techniques in combination.

This genealogy is itself a methodological argument. Technologies are not selected from a catalogue and applied to a project. They accrete through use, through *mucking around*, which in this context comprises cross-fertilisation between projects running simultaneously, and the specific expertise and curiosity that each person brings to the studio on a particular day. The Polycam-and-stone moment was not accidental in the sense of being random. It was made possible by a sequence of prior encounters with related technologies, each of which had extended the studio's and the team's sense of what was possible.

For Wainer, as an artist, the residency at the VIP Studio represented a precious and rare opportunity to exhibit a process of creativity rather than a finished outcome:

‘In general, at these first stages of the works, we don't have the possibility or the opportunity to show our reflections, experimentations or prototypes. To have this opportunity here is really interesting: to exchange, discuss with audiences how they receive this part of the work.

The original plan had been to train an AI model on indigenous materials, on the ethical assumption that creating something bespoke was the right approach. Through experimentation and discovery, however, the realisation emerged that creating a separate database with indigenous people's history was itself politically problematic. The more significant ethical problem was that these histories are almost entirely absent from pre-existing generative image models. As Marina described the shift:

'I realised that I had focused on the interest and quality of the images themselves and had lost sight for a moment of what was essential: to give the Tehuelche community access to this technology so that they could imagine and produce their own content.'

The installation presented at Lakeside Arts in Nottingham drew together holograms of Tehuelche legends with AI-generated projection-mapped visuals, a spatialised soundscape in Spanish and English, alongside field recordings of the Patagonian landscape. Marina commented on how this approach responded to the project's concerns:

'I realised now showing this version, that we are using AI in quite an opposite way because we are not creating spectacular images from generative AI. The focus is not on the image itself, but in giving the possibility to create something to this community.'



Fig 3. Marina Wainer experimenting with holograms and projections for her project Worl(d)s.

The installation included an interactive component in which visitors blew into a microphone to change the holographic images. That final gesture concentrated the installation's entire ethical and cosmological concern into a single bodily act: the wind, in Tehuelche mythology the breath of the ancestors, returned as the breath of a gallery visitor in Nottingham. From an original touch-based interactivity, the creative team had arrived, through off-script experimentation, at something far more resonant: an event, in Giddings's (2009) sense, a collusion of human and nonhuman

part(icipants) – of human breath, indigenous mythology, and holographic technology that no single agent had authored.

Jen Bell: Digital Twinning, Selfhood, and the Politics of Self-Replication

Jen Bell's residency took the studio's relationship to the body as its most explicit subject. Bell, a cultural anthropologist and practice-based researcher, brought a framework for understanding technological change oriented towards:

'Not of what new immersive and generative technologies can do, but of how they work, who they privilege and what it feels like to engage in them.'

Her project, *Conversations with Myself*, used the full range of the studio's capture capabilities to produce a series of digital versions of Bell herself.

Jen set out to create versions of herself to inhabit virtual worlds and then interact and converse with her real self. This was an exploration of what was possible, from creating uncanny Unreal Metahuman versions of her, dressing this digital copy and inhabiting it via motion and face performance capture. This created a framework where Jen could perform a two way dialogue, between the real and recorded virtual version of herself, or blur the lines by inhabiting the virtual Jen and performing from our mocap system to an audience.

As she described the iterative process:

'We have iterated and made versions of 'digital Jen': motion capture Jen, Jen the hologram, lots of different AI Jens, and Jen as a metahuman.'

The iterations were not refinements towards a single, stable destination. They were, as the project framed them, curiosities of the near future: versions, representations, avatars, and conversations that explored the relationship between physical and digital by multiplying it, refusing to resolve it into any single account of what a digital self might be.

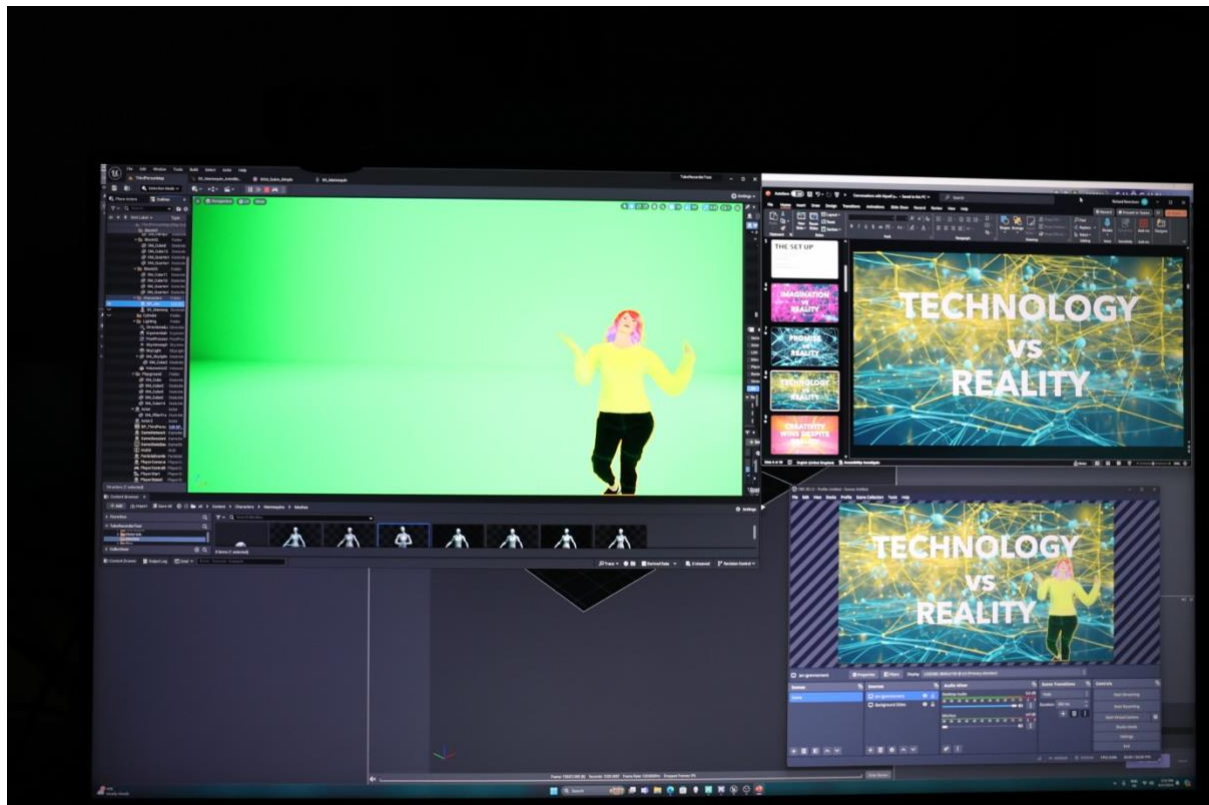


Image 4: A screenshot of *Conversations with Myself* in development.

Each new version of digital Jen required the physical Jen to undergo a process of proprioceptive calibration: to understand, through bodily engagement with the capture system, the holographic display, and the AI platform in question, what each technology could and could not do with the material it was given. The enacted dimension of 4E cognition (Varela, Thompson, and Rosch, 1991) is especially visible here, because the material being enacted upon was the practitioner herself, and the knowledge being produced was, at every stage, knowledge about what it means for a body to encounter its own digital double. Bell's critical framing is entirely continuous with the ethos of the studio, and her residency extended it into the politics of self-representation, the value of individuality in the age of machine learning, and the question of what it means to invest creatively and critically in the technologies that are, regardless of that investment, already in the process of transforming what a self can be.

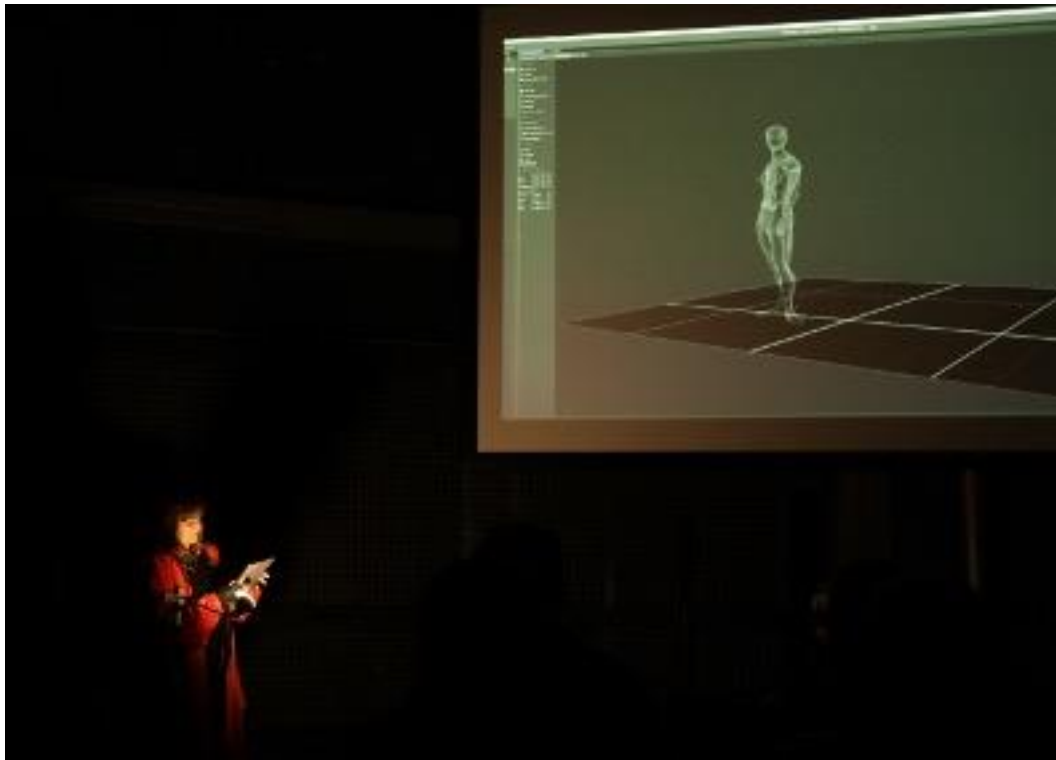


Fig.5. Jen Bell presenting her work “Conversations with Myself” at the Virtual and Immersive Production Studio.

The SHAPESHIFTER Residency: Family, Play, and the Cushion as Co-Creator

SHAPESHIFTER is a collaboration of multidisciplinary artists Maggie Bain, David Gochfeld, Ruth Mariner, Freya Sewell and Lucy Wheeler from theatre, opera, digital art, biophilic design, and immersive media, brought together around a creative question at once scientific and philosophical: how might the diversity of the natural world, in which gender fluidity and non-binary expression are not exceptions but abundant and ordinary facts of life, be used to challenge the assumption that binary gender is natural? The experience centres on Pùca, a shapeshifting, non-binary nature spirit from Celtic folklore, performed live by an actor whose movements are captured in real time and rendered as a three-dimensional animated character visible to audience members wearing VR headsets. Actor and audience share the same physical space; what the audience sees through their headsets is the physical space remade as a virtual environment in which Pùca moves alongside them. As the team articulated it:

‘The heart of the experience will be the co-presence of the live performer and audience in shared physical and virtual space, and this is what we wanted to explore in our residency at the VIP Studio.’

The central technical challenge was achieving accurate alignment between the physical and virtual spaces, so that multiple audience members wearing headsets could move through the room without collision, each seeing their own position and the positions of others accurately represented as avatars in the shared virtual world. The studio’s Vicon mocap system made tracking all participants possible, and the team worked closely with the studio to find a solution that, once achieved, opened up new questions about the affordances of mixed reality.



Fig.6 . The Shapeshifter’s team testing the capabilities for multi-player interactions.

The testing session the team recalls most vividly was distinguished by the presence of fellow resident Jen Bell's family, and by the speed with which a cushion taken from the studio's sofas became an object of intense creative interest. The SHAPESHIFTER team's own memory captures the quality of the event:

'It was delightful watching her children explore and play within the environment we'd created — discovering the extra-dimensional pods and interactable triggers hidden in the environment, playing catch with the tracked prop (a pillow), and reacting to the sudden appearance of the main character, Pùca.'

This is microethology (Giddings, 2009) in practice. The cushion, the sofas it came from, Pùca, the tracking system, the family members, the studio's open-ended invitation: all are part(icipant)s in what happened. The session produced an event, and the event produced knowledge about how multiple people can inhabit a shared virtual space simultaneously, about the embodied dynamics of virtual interaction, and about the kinds of play that emerge when hierarchies of expertise are suspended. The tracked physical props pointed towards an interactive texture that was genuinely unpredictable, opening up a range of playful possibilities whose emotional register was precisely aligned with the piece's thematic concerns. Pùca is a spirit of transformation and play; the technology, handled in this way, became expressive of the same qualities.



Fig 7. The Shapeshifter's team testing players' interactions in the virtual environment.

Nina Willment: Ecology, Self-Reflexivity, and the Ethics of Making

Nina Willment's residency took the studio's non-innocent relationship to its own technologies as its explicit subject. A cultural and economic geographer working at the intersection of digital technologies, audiences, and climate action, Willment came to the studio with a research question that was also a methodological provocation: could virtual and immersive production technologies be used to tell critical stories about their own environmental impact? The result, developed across six months of learning, testing, and iterative making, was a twenty-five-minute immersive experience entitled *Green Screens? Digital Technologies and Environmental Sustainability*, which confronted public audiences with the globalised social and environmental consequences of digital consumption by taking them inside a VR headset they were physically wearing and breaking that device down into its component parts, tracing each through the supply chains of extraction and waste that digital technology produces. From the VR, audiences moved to the nostalgic physical setting of a teenager's bedroom desk, where a hologram introduced the circular economy as a possible alternative logic, and were invited to write climate pledges on floppy discs and post them through an old television set.

The piece was self-reflexive in the specific sense the studio's methodology requires: it made its own conditions of production part of its subject, folding the question of ecological impact back into the work itself. The studio's frugal, resource-light infrastructure was not only a practical ethos but an enacted argument about what responsible immersive practice might look like (Albert, 2019), and *Green Screens?* made that argument visible. Willment's account of the studio's contribution gives direct expression to what curiosity-led practice produces for the practitioners who pass through it:

'The VIP Studio provided me with the opportunity to develop my skillset and knowledge of how to innovate and work with immersive technologies. Through the support of the studio, working alongside amazing academics and artists in a collaborative, nurturing and fun environment, we were able to develop our creative practice and research trajectory in novel and career defining ways.'

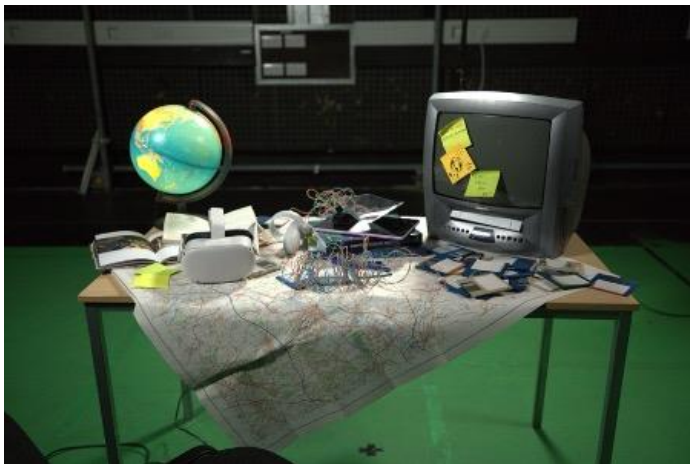


Fig.8. Nina Willment's stage design for her VR project *Green Screens?*

Green Screens? went on to be presented at Trinity College Dublin, Nottingham's Theatre Royal, and the Green Hustle Festival, and was submitted to the Aesthetica Film Festival and the Lumen Prize. Its trajectory from studio residency to public exhibition illustrates that curiosity-led experimental practice does not necessarily produce smaller, more tentative or less impactful outcomes. It produces work with the specificity, coherence, and critical ambition that only emerges when the practitioner has been given genuine time and freedom to *discover* what they are making.

From Residency to Programme: Create Growth and the Scaling of Curiosity

If the residency model provides the most concentrated evidence for curiosity-led practice, the DCMS funded Nottingham/Nottinghamshire based Create Growth³ (hereafter CGN2) programme provides evidence for its scalability and transferability. CGN2 applies the same principles to cohorts of creative practitioners from across the region, many of whom arrive not knowing one another and not knowing, in any precise sense, what they have come to do. We offer it here as evidence that curiosity-led practice is not a bespoke methodology available only to well-resourced research studios, but a set of replicable conditions that other practitioners and organisations can adopt and adapt.

The levelling that characterises the residencies reproduces itself, reliably and quickly, within the Create Growth cohorts. Attempts to curate discipline-specific groups consistently gave way to mixed cohorts, and initial anxiety about whether those mixes would work dissolved within the first few exercises. This mirrors, in fact, the interdisciplinary logic of the studio itself: participants arrive carrying expertise in different domains, and that distributed knowledge means any individual may move fluidly between the role of expert and novice as they encounter different technologies and scenarios. Within minutes, participants become levelled: facing something together, coming into it in a space of inquiry. It is all about curiosity and generosity. This levelling is legible in all three of our theoretical frames. In Kozel's (2008) terms, nobody in the room can know in advance what a technology will do when they interact with it, so the body's exploratory impulse becomes the shared starting point for everyone. In the 4E framework (Varela, Thompson, and Rosch, 1991), participants are coupled to an environment that actively shapes what they can think and do, and that coupling is broadly equivalent for everyone who enters the space. In Giddings's (2009) account, the event of encounter with an unfamiliar technology distributes agency across human and nonhuman part(icipant)s in ways that do not reproduce prior hierarchies of expertise.

The same CCM principles that shaped the game jams (Kennedy, Atkinson and Wreyford, 2020) – rapid team formation across difference, collaborative skills-sharing, the facilitator as co-inquirer rather than authority – are directly operative in CGN2. What makes the university studio context

³ More information about this regional programme of business engagement, which ran from 2024-2026, can be found at <https://creategrowthn2.co.uk/>.

distinctively generative is additionally the fact that it is not client-driven. In a commercial creative agency, anything produced is for a client, and as soon as the work is delivered the team moves on. There is no time to reflect, no time to further explore ideas with potential. Being in a university environment allows for the kind of reflexivity that genuinely supports innovation: the capacity to do a thing to see if it can be done, not because it is a final product but because it might be useful, or generative, or worth writing about.

The collaborations that emerge from CGN2 have the character of contagious creativity: an affect that spreads through social contact, through witnessing someone else's excitement, through the low-stakes proximity that an in-person, extended-duration, free engagement programme makes possible. Melody Crafters and Makers of Imaginary Worlds began working together purely because of their participation in CGN2, doing something neither would have anticipated. Programme participant DEPTHM, a creative production studio, ended up leading a volumetric capture workshop for a dance project, entirely outside their prior experience, having picked up the technology with remarkable speed and generosity. None of these collaborations were designed. They were produced by conditions – the CCM's principles, the studio's spatial and relational ethos, the deliberate levelling of hierarchies of expertise – that make the unexpected not only possible but likely.

Other regions achieve this level of creative connectivity through access to much larger sources of funding, particularly those that have benefitted from UK Research and Innovation grants through its Creative Industries Clusters, Immersive Arts or CoSTAR programmes since 2018. The VIP Studio does it through agile, light-footed organisation, through the reuse of buildings, relationships, and methods, and through a commitment to keeping the threshold of participation as low as possible. We know there are other virtual production studios and immersive technology facilities working in similar ways across the world. The aim in naming and theorising curiosity-led practice is not to claim exclusive ownership but to draw out the insights, conditions, and commitments that make it work – so that they can be examined, adapted, and adopted by others working to make creative technology *and the space of possibility that these technologies afford*, genuinely open.

Conclusion: Theory Made from Practice

The studio's methodology cannot be described adequately as a set of techniques. It is better understood as a disposition – or, in Barad's (2007) terms, an apparatus – that produces curiosity, generosity, and the capacity for unexpected collaboration as phenomena through the intra-actions it enables. What this article has traced, across the studio's institutional history, its spatial and relational ethos, and the specifics of four very different residencies, is the cumulative effect of a set of commitments that predate the studio's founding and that have been refined, tested, and extended through every encounter that has taken place within it.

The theoretical frameworks that illuminate this practice were *found* in the practice: the practice and the frameworks recognised one another. Kozel's (2008) practice-phenomenology describes with precision what happens when a participant encounters an immersive technology for the first time. The 4E framework (Varela, Thompson, and Rosch, 1991) offers analysis at the level of cognitive science: cognition as enacted, requiring *doing* rather than prior *knowing*. Giddings's (2009) microethological attention captures what is actually happening when a cushion becomes a co-creator or a small stone becomes the orientation for an entire artistic project. And Vossenbergs's (2018) feminist frugal innovation framework names the political dimension of what the studio's agile, non-extractionist, gender-aware model represents in the landscape of creative industries practice.

What connects all four frameworks is their shared insistence that knowledge is relational, emergent, and produced through encounter rather than possessed in advance. That is also what connects the studio's feminist and interdisciplinary genealogy with the theoretical apparatus brought to bear on it here. The commitment to making things with and for the people most likely to be excluded from them is not a constraint on what the studio can produce. It is the *condition of possibility* for the most surprising and generative work it has enabled.

The four residencies documented here – Wainer's ethical reorientation around AI and indigenous cosmovisions, Bell's iterative multiplication of a digital self, SHAPESHIFTER's discovery that a borrowed cushion could unlock an entire vocabulary of mixed-reality interaction, and Willment's self-reflexive folding of ecological critique back into its own conditions of production – are the methodology's evidence, and its continuation. Each produced knowledge that arrived through the body, through the event, through the specific coming-together of people, technologies, spatial arrangements, and orientations of curiosity that no planning document or call for participation had fully specified in advance.

What this article proposes, and what the evidence of the residencies and the CGN2 programme supports, is a named methodology: *curiosity-led practice*. It builds on and is in sympathetic dialogue with our kindred research traditions – with practice-led research, in which creative practice generates new knowledge through making (Smith and Dean, 2009), and with Benford et al.'s (2013) performance-led research in the wild, through which insight and transformative innovation is achieved by conducting research outside the laboratory. Curiosity-led practice extends these traditions by attending specifically to the affective and relational conditions under which encounter with technology becomes generative: the disposition of the space, the quality of the invitation, the shared commitment to play as the mode through which familiarity and confidence are produced. Those conditions are never politically neutral. Curiosity of this kind is always cultivated against the grain of cultures that distribute access to technology unequally, which is why our curiosity-led practice is irreducibly feminist. It benefits from a frugal approach to infrastructure, a facilitatory disposition that is warm, open, and genuinely non-hierarchical, and a collective willingness to model the same playful uncertainty we invite in our collaborators. In a

Baradian (2007) reading of what happens in that space, it is because curiosity was brought to it that the space became a curious one. The studio did not contain curiosity as a pre-existing property. It produced curiosity as a phenomenon.

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