

Beyond Borders Project Resource

A comprehensive exploration of epistemic pluralism, process-led research, and institutional transformation in academia

Compiled for the Beyond Borders Project

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Date: 11th March 2025

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Title & Opening Concept

Transdisciplinary Research Practices as Praxis: Visualising the Porous Interface

The boundaries that define disciplines, institutions, and research methodologies are neither fixed nor impermeable; rather, they are fluid constructs that shift in response to evolving epistemic, cultural, and technological contexts (Rogoff, 2000; Nelson, 2013). This chapter positions research as an active engagement with knowledge in flux, arguing that transdisciplinary practice challenges conventional structures of knowledge production, dissemination, and validation. The concept of the praxis point of interface emerges as a critical framework through which to understand these interactions, locating research at the threshold of disciplines, where theoretical reflection, practical engagement, and tacit knowledge intersect (Polanyi, 1966; Haseman, 2006).

This chapter does not merely describe transdisciplinary research; it performs it. Rather than adhering to the conventions of linear, text-driven analysis, it adopts a graphic exposition, integrating text, image, and spatial design to foreground alternative modes of research articulation (Pryor & Parker, 2015). This methodological approach aligns with the broader ethos of *Beyond Borders*, which calls for a re-examination of how research operates within and beyond institutional constraints. If universities have historically sought to categorise knowledge into discrete, textual formats, this chapter resists such containment, instead treating research as a layered, performative act – one that unfolds through visual and textual engagement alike (Rancière, 2009; Sullivan, 2011).

To fully grasp the praxis, point of interface, it is necessary to interrogate the mechanisms by which institutions shape, validate, and constrain knowledge production (Massey, 2005; Borgdorff, 2011). The visual-tactile structure of this chapter mirrors these tensions, embedding research within a non-hierarchical, multi-modal discourse. Readers are invited to engage with the text as they might engage with research itself – not as a fixed, prescriptive argument, but as an interactive, iterative process that unfolds through engagement, interpretation, and intervention.

The following pages explore the historical, theoretical, and applied dimensions of the praxis point of interface, moving between critical analysis, case study reflection, and experimental visual methodologies. By doing so, they propose a reconceptualisation of transdisciplinary research as an act of resistance – one that refuses textual containment, embraces epistemic uncertainty, and reconfigures the very structures through which research is articulated and assessed (Taylor, 2018; Loveless, 2019).

Introduction & Reader Orientation

If research is to be understood as an active engagement with knowledge in flux, then its articulation must reflect this condition. The praxis point of interface offers a way of conceptualising research as something that is neither wholly theoretical nor wholly practical, but rather a site where disciplines, methodologies, and knowledge systems converge, collide, and are continuously renegotiated (Nelson, 2013; Borgdorff, 2011). This chapter extends Robin Nelson's (2013) model of Practice as Research (PaR) – which emerged primarily in performance studies – into the broader fields of art, design, and transdisciplinary innovation. It does so by treating research not merely as an object of study but as a lived, iterative process in which theory and practice operate as interdependent forces (Sullivan, 2011; Haseman, 2006).

This performative approach challenges institutional frameworks that privilege text-based knowledge production, raising questions about the epistemic hierarchies that govern research validation (Massey, 2005; Rancière, 2009). Universities remain structured around a legacy of Cartesian dualism, separating the body from the mind, action from reflection, and practice from theory (Bolt, 2007; Loveless, 2019). In this model, textual knowledge is positioned as explicit, legible, and verifiable, whereas material, performative, and tacit knowledge remain undervalued and often marginalised (Polanyi, 1966; Ingold, 2013).

The praxis point of interface exists within these tensions, proposing an alternative framework for research articulation. This chapter enacts its argument formally and conceptually, using a graphic exposition to explore the ways in which research is both constructed and constrained by institutional paradigms. Readers are invited to engage with this work as they would engage with research itself – not as a linear path toward fixed conclusions, but as an open-ended, interpretative space where meaning is produced through interaction, reflection, and negotiation (Rogoff, 2000; Taylor, 2018).

The Praxis Point of Interface & Its Applications

If knowledge production is to account for the complexity of lived experience, it must move beyond static categorisations of theory and practice. The praxis point of interface is a conceptual framework that challenges these binaries, positioning research as an ongoing negotiation between theoretical abstraction, practical engagement, and emergent, tacit knowledge (Nelson, 2013; Borgdorff, 2011). Within this framework, research is understood as a dialogical, iterative process, where meaning is not simply extracted but formed through cycles of experimentation, failure, reflection, and adaptation (Haseman, 2006; Sullivan, 2011).

The praxis point of interface functions in three key ways: as a methodological site, an institutional critique, and a performative epistemology. Methodologically, it foregrounds transdisciplinary learning, creative innovation, and speculative research practices that do not conform to established disciplinary structures (Rogoff, 2000; Massey, 2005). It functions as an institutional critique by exposing the ways in which universities codify and contain knowledge production, often imposing rigid assessment models that privilege textual articulation over embodied or material research (Taylor, 2018; Loveless, 2019). As a performative epistemology, the praxis interface refuses the expectation that research should culminate in fixed, authoritative conclusions. Instead, it emphasises emergent knowledge – insights that arise through process, interaction, and the instability of research environments (Ingold, 2013; Bolt, 2007).

This chapter enacts its own argument by embedding these principles into its structure. Rather than adhering to a purely textual form, it employs a visual-tactile methodology, integrating textual analysis with graphic exposition, spatial composition, and experimental typography. In doing so, it proposes an alternative mode of research articulation – one that reflects the unpredictability, multiplicity, and performativity of transdisciplinary inquiry (Pryor & Parker, 2015; Sullivan, 2011).

Praxis as a Liminal Space

The praxis point of interface is not a fixed location within research; it is a liminal space where epistemic boundaries blur and disciplinary distinctions collapse. This threshold space, situated between theory and practice, knowledge and intuition, institutional validation and creative autonomy, represents a site of negotiation rather than resolution (Nelson, 2013; Borgdorff, 2011). Within this framework, research does not progress in a linear fashion toward a definitive conclusion but instead unfolds as a recursive, non-hierarchical process of inquiry, intervention, and reconfiguration (Sullivan, 2011; Haseman, 2006).

Liminality has been theorised as a condition of transition, where conventional structures are suspended, and meaning is temporarily destabilised (Turner, 1969; Massey, 2005). Within research environments, this condition emerges in moments of cognitive dissonance – when theoretical frameworks prove insufficient, when unexpected material or performative outcomes challenge prior assumptions, or when disciplinary methods must be reconfigured in response to emergent questions (Ingold, 2013; Bolt, 2007). The praxis interface exists within this state of continuous transformation, positioning failure, revision, and non-linearity as fundamental research principles rather than obstacles to be overcome (Taylor, 2018; Loveless, 2019).

If traditional research methodologies prioritise clarity, stability, and conclusive articulation, then the praxis point of interface embraces ambiguity, fluidity, and the open-ended nature of knowledge production. By occupying this liminal space, research becomes an active process of unmapping – challenging fixed epistemic territories and resisting the imposition of predetermined research outcomes (Rogoff, 2000; Massey, 2005). The following pages will explore how this framework operates within transdisciplinary practice, institutional critique, and creative innovation, positioning the researcher not as a passive observer but as an active agent within shifting epistemological landscapes.

Hermeneutic Spiral & Iterative Learning

Knowledge production within the praxis point of interface does not adhere to a linear trajectory but instead follows a recursive, evolving cycle of engagement, reflection, and adaptation. This iterative structure can be conceptualised through the hermeneutic spiral, a framework that foregrounds how meaning is continuously renegotiated rather than definitively resolved (Gadamer, 1975; Ricoeur, 1981). Unlike conventional research methodologies that assume a progression from hypothesis to conclusion, the hermeneutic spiral rejects finality, suggesting instead that knowledge production is a dialogical process – a series of engagements in which each iteration reshapes prior understanding (Borgdorff, 2011; Nelson, 2013).

Within Practice as Research (PaR), the hermeneutic spiral manifests through cycles of making, critical reflection, and theoretical articulation, with insights emerging not solely from observation but from direct engagement with materials, processes, and embodied experience (Sullivan, 2011; Haseman, 2006). The iterative nature of this framework means that failure, revision, and disruption are not incidental to research but constitutive of its development. Each iteration deepens epistemic understanding, positioning research as a living system rather than a static construct (Bolt, 2007; Ingold, 2013).

This model of knowledge production challenges institutions that privilege fixed, outcome-driven assessment frameworks, demanding instead a reconsideration of how research is validated, articulated, and disseminated (Taylor, 2018; Loveless, 2019). If meaning is in constant flux, then research cannot be evaluated solely on its conclusions but must also be understood through its processes of transformation, reflexivity, and emergent knowledge production (Rancière, 2009; Rogoff, 2000). This chapter enacts these principles through its own graphic exposition, where text, image, and structure recursively engage with the very epistemic questions they explore, reinforcing that research is always in motion, always in negotiation, and always incomplete.

Bureaucratisation of PaR & Institutional Borders

While Practice as Research (PaR) has gained institutional recognition over the past two decades, its assimilation into academic structures has led to new epistemic tensions. Originally emerging as a challenge to conventional research paradigms, PaR was positioned as a methodology that foregrounded practice itself as a mode of inquiry, where embodied, material, and performative processes constituted legitimate research outputs (Borgdorff, 2011; Nelson, 2013). However, as universities have sought to codify and standardise PaR within existing assessment frameworks, its disruptive potential has often been constrained by the very structures that validate it (Sullivan, 2011; Taylor, 2018).

The bureaucratisation of PaR reflects a broader institutional anxiety toward non-textual knowledge production. Research outputs are still expected to be legible within text-based formats, often requiring that practice-led inquiry be supplemented with extensive written documentation (Loveless, 2019; Rancière, 2009). While this framing enables institutional validation, it also reinforces textual epistemic hierarchies, where performance, materiality, and tacit knowledge are recognised only insofar as they can be translated into linguistic form (Bolt, 2007; Ingold, 2013). This approach subordinates practice to theory, positioning the written exegesis as the locus of meaning rather than recognising practice itself as a primary research articulation (Haseman, 2006; Rogoff, 2000).

If PaR is to retain its methodological autonomy, it must resist institutional containment and instead propose new models of research validation. This requires challenging the dominance of text within academia, advocating for alternative formats that recognise the multiplicity of research articulation, including visual, performative, and iterative knowledge structures (Massey, 2005; Polanyi, 1966). The next section explores how these tensions manifest within the concept of the porous university, arguing for a shift toward epistemic fluidity over bureaucratic standardisation.

Counter-Mapping the Porous

If the bureaucratisation of Practice as Research (PaR) reflects a broader institutional discomfort with non-textual knowledge production, then the porous university emerges as an alternative model – one that prioritises epistemic fluidity, interdisciplinary engagement, and non-hierarchical research validation. Unlike the traditional university, which maintains fixed disciplinary structures, rigid assessment criteria, and outcome-driven research metrics, the porous university functions as a dynamic site of knowledge exchange, where research is not contained within discrete categories but is instead understood as a networked, iterative process (Massey, 2005; Rogoff, 2000).

The porous university challenges conventional academic structures by embracing uncertainty, process, and failure as integral components of research (Nelson, 2013; Taylor, 2018). Within this framework, knowledge is generated not through linear progression toward definitive conclusions but through cycles of experimentation, reflection, and adaptation (Haseman, 2006; Sullivan, 2011). This approach foregrounds material and performative research outputs as legitimate forms of articulation, dismantling the assumption that knowledge must be textualised to be institutionally recognised (Bolt, 2007; Ingold, 2013).

Reconceptualising the university as a porous, transdisciplinary research space requires a shift in how research is assessed, disseminated, and institutionalised. Rather than demanding that PaR conform to existing academic norms, the porous university asks: How might assessment structures be adapted to accommodate iterative, process-based knowledge production? What happens when research remains unfinished? Can institutions embrace knowledge as an evolving practice rather than a fixed output? The next section explores the role of visual-tactile methodologies within this epistemic shift, demonstrating how research might be structured beyond the limitations of textual articulation.

Visual-Tactile Dimension – Performing Knowledge Through Graphic Exposition

If the porous university challenges institutional constraints on knowledge production, then visual-tactile methodologies provide a framework for research articulation that resists textual containment. Within Practice as Research (PaR), the process of making – whether material, performative, or spatial – does not simply support theoretical reflection but constitutes knowledge production in itself (Bolt, 2007; Sullivan, 2011). This challenges the academic privileging of written documentation, calling instead for multi-modal forms of research articulation that integrate image, materiality, movement, and spatial arrangement as epistemic acts (Ingold, 2013; Loveless, 2019).

Graphic exposition is one such methodology. By embedding text, image, spatial composition, and performative structures into research representation, it disrupts the expectation that knowledge must be linearly communicated through linguistic means alone (Nelson, 2013; Haseman, 2006). Instead, it positions research as an embodied, iterative process, in which meaning emerges through the layering, interaction, and reconfiguration of different forms of articulation (Rogoff, 2000; Massey, 2005). This chapter itself enacts these principles, using visual layering, negative space, and typographic experimentation to foreground the tensions between readability and disruption, legibility and occlusion.

If research is performative – if it unfolds through interaction, reflection, and the negotiation of meaning – then its articulation must likewise be performative. This raises critical questions: How can institutions assess research that resists textualisation? What happens when knowledge cannot be translated into written form? How can visual-tactile research methodologies be integrated into academic discourse without being subordinated to explanatory text? The next section explores these tensions further, demonstrating how research operates within a multi-modal, recursive structure where form and content remain in constant dialogue.

Layering Meaning Through Multi-Modal Research Articulation

If the visual-tactile dimension of research challenges the dominance of text, then multi-modal research articulation disrupts the expectation that knowledge should be presented in a singular, linear format. Within Practice as Research (PaR), meaning emerges through iterative engagement with materials, processes, and performative structures, requiring a methodological approach that accommodates fluidity, interaction, and non-linearity (Nelson, 2013; Sullivan, 2011). In this context, research is not simply documented but enacted, forming a dynamic relationship between text, image, material, and spatial composition (Bolt, 2007; Ingold, 2013).

Multi-modal articulation resists hierarchical knowledge structures, where written text has historically been positioned as the primary mode of research validation (Haseman, 2006; Taylor, 2018). Instead, it proposes a dialogic structure, in which different research components – visual, textual, material, performative – exist in reciprocal relationship rather than subordination (Rancière, 2009; Loveless, 2019). This approach is not simply aesthetic; it is epistemological, foregrounding the reality that meaning is rarely singular, and knowledge is constructed through multiple, intersecting modes of articulation (Massey, 2005; Rogoff, 2000).

This chapter performs its own argument through graphic exposition, using spatial composition, text layering, and visual sequencing to position the reader as an active participant in meaning-making. Instead of passively consuming information, the reader is invited to engage with research as a multi-layered, evolving structure. This raises critical questions: How might universities integrate non-hierarchical research validation models? What happens when meaning emerges not through clarity but through disruption? Can research remain incomplete, open-ended, and participatory rather than being contained within fixed outputs? The following section explores these provocations further, considering how iterative research methodologies foreground uncertainty as an epistemic condition rather than a limitation.

Study – Redesigning Local Public Spaces Through Iterative Research

The conceptual foundations of multi-modal research articulation are not limited to theoretical discourse; they manifest in applied, iterative research methodologies that directly engage with real-world contexts. The INOV10001: Design and Systems Thinking for Innovation course at the University of Bristol's Centre for Innovation and Entrepreneurship provides a compelling case study of how the praxis point of interface operates in transdisciplinary learning environments, bridging theoretical inquiry, material experimentation, and emergent knowledge production.

Students in this course worked collaboratively to reimagine local public spaces, applying design thinking, systems mapping, and iterative prototyping to address community-driven challenges. Unlike conventional research projects that prioritise written analysis and predefined outcomes, this approach foregrounded process over product, requiring students to navigate cycles of making, reflection, and adaptation (Brown, 2009; Kolko, 2010). The research unfolded not through linear hypothesis testing but through engagement with materials, site-specific constraints, and user feedback, reinforcing the recursive nature of the praxis interface (Schön, 1983; Ingold, 2013).

One project identified accessibility barriers in urban green spaces, highlighting how poorly maintained pathways, insufficient seating, and inadequate signage disproportionately affected elderly residents and individuals with disabilities. Rather than proposing a single, static solution, students developed a modular seating and wayfinding system, refining their prototypes through on-site user testing and iterative redesign. Each iteration generated new insights, demonstrating how knowledge production occurs within the process of making, rather than being imposed from external theoretical frameworks (Borgdorff, 2011; Sullivan, 2011).

This case study illustrates how iterative methodologies foreground uncertainty as an epistemic condition, rather than treating it as a limitation. The next section further explores how user engagement and material responsiveness shape research outcomes, challenging institutional expectations of fixed, text-based articulations.

User Engagement, Iterative Prototyping, and Knowledge Emergence in Transdisciplinary Research

The iterative research methodologies employed in INOV10001: Design and Systems Thinking for Innovation illustrate how knowledge does not emerge fully formed but is produced through cycles of user engagement, material responsiveness, and prototype refinement. Within this framework, research is not an act of top-down knowledge imposition but a process of negotiation between theoretical inquiry, embodied experience, and community-driven insights (Schön, 1983; Brown, 2009).

A core principle of iterative prototyping is that design solutions are not static; they evolve in response to real-world constraints and user interaction. In the public space accessibility project, initial prototypes of modular seating and wayfinding systems underwent multiple iterations, shaped by feedback from park visitors, site-specific environmental conditions, and material testing. These interactions revealed complexities not accounted for in early-stage theoretical research – demonstrating that knowledge emerges within the act of making, testing, and adapting rather than being determined in advance (Kolko, 2010; Ingold, 2013).

This process also disrupted the academic privileging of certainty and fixity in research validation. While institutions often assess research through clear, conclusive findings, iterative methodologies foreground uncertainty, contingency, and process-driven insights as fundamental epistemic conditions (Borgdorff, 2011; Sullivan, 2011). The seating prototypes, for instance, were initially designed with aesthetic and functional considerations, yet user testing revealed overlooked accessibility challenges, requiring the integration of adjustable height features and tactile ground indicators for visually impaired users. These adaptations were not corrections but integral to the research process itself, reinforcing that knowledge is not produced in isolation but through constant engagement with material, space, and human interaction (Loveless, 2019; Rogoff, 2000).

The next section will explore how research articulation must shift to accommodate these emergent, iterative insights, questioning how institutions can integrate multi-modal validation frameworks that reflect the reality of process-based, transdisciplinary knowledge production.

Modal Research Validation and the Challenges of Institutional Integration

The iterative and emergent nature of transdisciplinary research, as demonstrated in INOV10001, raises critical questions about how institutions validate and assess knowledge that does not conform to traditional academic models. In Practice as Research (PaR), the research process itself is often the primary site of meaning-making, yet universities continue to prioritise fixed outcomes, conclusive findings, and text-based articulation as the dominant modes of validation (Borgdorff, 2011; Nelson, 2013). This epistemic hierarchy marginalises visual, material, and performative research outputs, positioning them as supplementary rather than central to knowledge production (Bolt, 2007; Sullivan, 2011).

Multi-modal research validation offers an alternative approach – one that accounts for the nonlinearity, uncertainty, and process-driven nature of knowledge emergence. Rather than reducing research to a single output, multi-modal assessment acknowledges that insights may be produced through visual documentation, iterative prototyping, performative engagement, and embodied experience (Haseman, 2006; Ingold, 2013). This challenges the conventional academic assumption that knowledge must be articulated through language to be institutionally recognised, arguing instead for a more expansive definition of research outputs that includes spatial, material, and interactive articulations (Rogoff, 2000; Loveless, 2019).

The challenge of institutional integration remains significant. While universities increasingly accept PaR and transdisciplinary methodologies, assessment criteria still prioritise written reflection over performative or experimental documentation. The question remains: Can research be institutionally validated without being translated into text? Can failure and iteration be recognised as epistemic contributions rather than deviations from methodological rigour? What happens when research remains unfinished? The next section examines how these provocations intersect with the porous university model, proposing structural changes that could facilitate a shift toward process-driven research validation.

Institutional Resistance to Non-Traditional Research Methodologies

Despite increasing recognition of Practice as Research (PaR) and transdisciplinary methodologies, institutions remain structured around epistemic hierarchies that privilege textual articulation over visual, material, or performative research outputs (Borgdorff, 2011; Nelson, 2013). Universities, as sites of knowledge production, often struggle to accommodate research that resists containment within fixed categories, disciplines, or assessment frameworks, reinforcing traditional paradigms of legitimacy and academic rigour (Sullivan, 2011; Taylor, 2018).

This resistance is not merely structural but conceptual. The historical privileging of written knowledge in academia reflects an underlying assumption that research must be explicit, verifiable, and stable to be validated (Rancière, 2009; Rogoff, 2000). In contrast, non-traditional methodologies – particularly those grounded in material practice, iterative experimentation, and performative inquiry – operate within a paradigm of instability, emergent meaning-making, and epistemic uncertainty (Ingold, 2013; Loveless, 2019). This tension between fixity and flux, between resolution and iteration, highlights why institutions struggle to legitimise research that is unfinished, processual, or resistant to textualisation (Massey, 2005; Bolt, 2007).

As demonstrated in INOV10001, research insights often emerge through cycles of failure, adaptation, and participatory engagement, yet academic structures remain reluctant to formally recognise process as a research outcome. If universities are to meaningfully integrate transdisciplinary research, they must shift from linear assessment models toward more porous, iterative, and multi-modal validation structures (Haseman, 2006; Sullivan, 2011). The following section explores how institutional frameworks might be reconfigured through the lens of the porous university model, examining whether academia is capable of evolving beyond its fixation on outcome-driven assessment toward a model of knowledge production that embraces fluidity, interaction, and uncertainty.

Institutional Frameworks Through the Porous University Model

If institutional resistance to transdisciplinary and non-textual research methodologies stems from their inability to be easily codified within pre-existing academic structures, then the porous university model provides an alternative framework – one that prioritises fluidity, interdisciplinarity, and process-driven research validation (Massey, 2005; Rogoff, 2000). Unlike traditional universities, which operate within rigid disciplinary boundaries and outcome-oriented assessment criteria, the porous university is structured as a network of knowledge production, where research is not contained within predefined fields but emerges dynamically through exchange, negotiation, and iteration (Nelson, 2013; Sullivan, 2011).

This model disrupts the hierarchical validation structures that prioritise written articulation over material, embodied, and practice-led research (Borgdorff, 2011; Bolt, 2007). Instead of demanding that research outputs conform to existing textual paradigms, the porous university embraces multi-modal assessment strategies, recognising that knowledge may be generated and communicated through visual documentation, spatial engagement, iterative prototyping, and performative processes (Haseman, 2006; Ingold, 2013). This reframing challenges the assumption that knowledge must be stabilised to be assessed, positioning research instead as a continuously evolving dialogue between form, content, and process (Taylor, 2018; Loveless, 2019).

Yet, institutionalising the porous university model requires a fundamental restructuring of how research is validated and disseminated. If universities are to accommodate fluid, processual research methodologies, they must move beyond text-centric evaluation models toward assessment criteria that recognise emergent, iterative, and multi-modal articulations of knowledge. The following section examines how this shift might be operationalised, exploring practical interventions that could facilitate the integration of porous methodologies within existing academic structures.

Practical Interventions for Integrating Porous Methodologies into Academic Structures

The transition from rigid, outcome-driven research validation models to a porous university framework requires structural changes that acknowledge the iterative, multi-modal, and emergent nature of knowledge production (Massey, 2005; Rogoff, 2000). While theoretical models propose epistemic fluidity and interdisciplinary exchange, institutional transformation demands concrete strategies that allow for the integration of non-textual, process-driven methodologies within research assessment frameworks (Nelson, 2013; Sullivan, 2011).

One key intervention is the adoption of iterative assessment models, which would shift evaluation criteria from final research outputs to an ongoing process of engagement, reflection, and adaptation (Borgdorff, 2011; Bolt, 2007). Instead of positioning assessment as a singular act of judgment after a project, iterative models recognise that knowledge emerges through cycles of failure, revision, and discovery, mirroring the iterative logic of Practice as Research (PaR) (Haseman, 2006; Ingold, 2013). This would necessitate changes in funding structures, research timelines, and institutional review processes, ensuring that process-driven research is not penalised for resisting conventional academic outputs (Loveless, 2019; Taylor, 2018).

Another intervention involves expanding research articulation beyond text, allowing for visual, material, performative, and spatial forms of knowledge expression to be considered primary research outputs, rather than requiring supplementary written justification (Sullivan, 2011; Ranci re, 2009). Institutions could implement multi-modal research portfolios as standard practice, integrating diverse forms of articulation without reducing practice-led inquiry to explanatory writing.

The next section will explore the Praxis Manifesto as a strategic framework for advocating these institutional changes, outlining key propositions that challenge dominant academic paradigms and propose a reconfiguration of research structures.

Praxis Manifesto – A Call for Structural Change in Academic Research

The Praxis Manifesto is not a prescriptive framework but a strategic provocation – a series of propositions designed to challenge the dominant epistemic hierarchies that govern academic research validation. While the porous university model suggests that knowledge production should be fluid, iterative, and transdisciplinary, its full integration into academic structures requires a fundamental shift in institutional policies, assessment criteria, and research articulation methodologies (Massey, 2005; Rogoff, 2000).

This manifesto proposes a reconfiguration of research structures, grounded in seven key principles:

1. Knowledge is iterative, not final – Research should be assessed as an ongoing process, not as a fixed outcome (Borgdorff, 2011; Ingold, 2013).
2. Failure is an epistemic event – Unresolved questions, methodological shifts, and unexpected discoveries must be recognised as integral to research (Haseman, 2006; Nelson, 2013).
3. Assessment must expand beyond text-based validation – Visual, performative, material, and spatial forms of articulation must be treated as primary research outputs, rather than requiring supplementary textual justification (Bolt, 2007; Sullivan, 2011).
4. Universities must embrace multi-modal articulation – Knowledge must be understood as existing across different modes of communication, with no singular format privileged over others (Loveless, 2019; Rancière, 2009).
5. Research must be evaluated through its processes, not just its conclusions – Methodological engagement and iterative inquiry should be central to academic assessment (Taylor, 2018).
6. The porous university must resist epistemic containment – Institutional structures must be reconfigured to enable cross-disciplinary knowledge production and experimental research validation (Massey, 2005).
7. Research should not be constrained by completion – Knowledge production must be understood as an evolving, open-ended process rather than a finite, deliverable product (Rogoff, 2000).

This manifesto serves as an invitation to challenge the dominant research paradigms of academia, calling for a system that recognises process over product, iteration over resolution, and multi-modal engagement over textual supremacy. The next section will explore the implications of counter-mapping academic structures, considering whether universities are capable of embracing the unfinished, the indeterminate, and the emergent as legitimate sites of knowledge production.

Counter-Mapping the Academy as an Act of Resistance

If the Praxis Manifesto calls for a reconfiguration of research structures, then counter-mapping offers a methodological and conceptual approach to enacting this transformation. Traditionally, mapping has functioned as a territorial practice, defining boundaries, establishing hierarchies, and enforcing the legibility of space through imposed structures (Harley, 1989; Massey, 2005). Within academia, research is similarly mapped onto institutional frameworks, where validation is determined by disciplinary categorisation, textual legibility, and methodological containment (Rancière, 2009; Rogoff, 2000). Counter-mapping, in contrast, is an act of disruption – a process of making visible the limitations, exclusions, and constraints imposed by dominant knowledge structures (Crampton & Krygier, 2006).

In the context of academic research, counter-mapping resists the stabilisation of knowledge, instead positioning research as an unstable, evolving, and contested space (Taylor, 2018; Loveless, 2019). Rather than reinforcing the borders of disciplines and methodologies, it asks: What is left unarticulated within dominant research paradigms? What forms of knowledge production remain illegible to institutional frameworks? How can universities acknowledge emergent, iterative, and performative methodologies without reducing them to supplementary textual explanations?

Counter-mapping the academy requires more than a critique of its structures; it demands an active reconfiguration of how research is recognised and assessed (Borgdorff, 2011; Sullivan, 2011). This means embracing research that is unfinished, reflexive, and multi-modal, challenging the notion that legibility equates to validity. The next section explores the implications of leaving research open-ended, asking whether institutions can meaningfully engage with knowledge that refuses finality, containment, or resolution.

Unfinished Nature of Research and Its Implications for Knowledge Production

If counter-mapping the academy exposes the limitations of institutional frameworks, then the unfinished nature of research presents a direct challenge to academic expectations of finality, resolution, and textual containment. Traditional research methodologies assume that knowledge progresses toward completion, where findings are stabilised, articulated, and submitted for validation (Borgdorff, 2011; Sullivan, 2011). However, within Practice as Research (PaR) and transdisciplinary methodologies, knowledge does not operate as a linear trajectory toward closure but as an iterative, evolving process (Haseman, 2006; Nelson, 2013).

The idea of unfinished research is not a limitation but an epistemic condition – one that foregrounds process over product, emergence over resolution, and dialogue over conclusion (Rancière, 2009; Loveless, 2019). Within creative and transdisciplinary inquiry, meaning is often produced through reflexive engagement, material exploration, and recursive cycles of making, reflection, and adaptation (Bolt, 2007; Ingold, 2013). To demand that such research be resolved into a definitive output is to ignore the ways in which knowledge is produced within and through practice, rather than simply extracted from it (Massey, 2005; Rogoff, 2000).

Yet, institutions remain resistant to research that refuses containment within finalised, text-based outputs. If universities are to accommodate epistemic openness, they must shift from assessing research as a finished product to recognising it as an ongoing, participatory dialogue (Taylor, 2018). The next section considers whether academic structures are capable of engaging with knowledge that is perpetually in motion, challenging the institutional need for resolution, verification, and textual legibility as conditions for validation.

Participation, Interaction, and Knowledge as a Social Process in Research

If research is understood as an unfinished, evolving process, then knowledge production must also be recognised as a social and participatory act. Traditional academic frameworks position the researcher as an isolated authority, producing knowledge that is stabilised, verified, and disseminated to passive recipients (Borgdorff, 2011; Sullivan, 2011). In contrast, transdisciplinary and practice-led methodologies challenge this model, foregrounding interaction, dialogue, and collective meaning-making as integral to research (Ingold, 2013; Taylor, 2018). Knowledge, in this view, is not produced in solitude but emerges through relational encounters, material engagements, and shared acts of inquiry (Massey, 2005; Rogoff, 2000).

Participation within research does not simply refer to collaboration between scholars but extends to audiences, materials, environments, and performative interactions. Within Practice as Research (PaR), for example, meaning is generated through iterative cycles of making, responding, and adapting, where both the researcher and the research itself are transformed by the process (Haseman, 2006; Nelson, 2013). Similarly, within social and artistic research, knowledge is produced not through controlled, predetermined outputs but through engagement with publics, spaces, and cultural contexts that shape and redefine the work in real-time (Bolt, 2007; Loveless, 2019).

This participatory model of research resists institutional demands for fixed conclusions. If knowledge is shaped through interaction, then its articulation must remain flexible, adaptive, and open to revision. The next section explores the implications of this shift, asking whether institutions can accommodate knowledge that is co-created, contingent, and inextricable from the contexts in which it is produced. It questions whether universities can meaningfully engage with research as a social process rather than as an individualised act of knowledge production.

Institutional Shifts Toward Participatory and Socially Engaged

If knowledge production is inherently participatory and socially embedded, then institutional research policies must evolve to accommodate co-creation, collective inquiry, and iterative engagement. Universities have historically positioned research as an individualised act, where knowledge is generated through expert authority, validated through peer review, and disseminated in fixed outputs (Borgdorff, 2011; Sullivan, 2011). However, within Practice as Research (PaR), socially engaged research, and transdisciplinary methodologies, knowledge does not emerge in isolation but is formed through interactions with communities, materials, spaces, and audiences (Ingold, 2013; Rogoff, 2000).

This shift demands new institutional policies that recognise process, participation, and collective authorship. Current assessment frameworks prioritise original contributions made by the individual researcher, but participatory methodologies require a redefinition of authorship – one that acknowledges knowledge as co-produced, emergent, and contextually situated (Massey, 2005; Loveless, 2019). Institutions must adapt by:

1. Redesigning Research Assessment Criteria – Validating projects based on process, interaction, and impact rather than solely on textual articulation or conclusive findings (Nelson, 2013; Bolt, 2007).
2. Recognising Collective and Public Engagement – Expanding evaluation models to include community collaboration, performative knowledge, and iterative research cycles (Haseman, 2006; Taylor, 2018).
3. Institutionalising Reflexive Research Practices – Encouraging methodologies that remain open-ended, adaptive, and responsive to the dynamic nature of knowledge production (Sullivan, 2011; Rancière, 2009).

The next section examines whether universities can fully embrace these epistemic shifts, questioning whether academic structures are capable of engaging with research that remains unfinished, interactive, and co-authored. It asks whether institutions can accept uncertainty and transformation as conditions of knowledge rather than deviations from research rigour.

The Limits of Institutional Adaptability – Tensions Between Research Fluidity and Academic Structures

While universities increasingly acknowledge participatory, practice-led, and transdisciplinary research, their ability to integrate these methodologies into existing academic structures remains constrained by deeply embedded epistemic frameworks. Institutional adaptability is limited by a reliance on measurable outputs, standardised assessment criteria, and fixed validation processes, all of which are antithetical to the fluidity, contingency, and iterative nature of emergent research methodologies (Borgdorff, 2011; Sullivan, 2011).

At the core of this tension is the expectation that research should produce conclusive, verifiable outcomes, even when the methodologies employed – particularly those drawn from PaR, socially engaged research, and speculative transdisciplinary inquiry – foreground openness, reflexivity, and process over finality (Nelson, 2013; Haseman, 2006). Universities struggle to accommodate research that is unfinished, adaptive, and resistant to textual containment, reinforcing traditional hierarchies of knowledge production (Massey, 2005; Rogoff, 2000).

Further complicating this integration is the institutional demand for research accountability, where funding models, tenure evaluations, and research impact assessments require clearly articulated outcomes that align with existing academic expectations (Loveless, 2019; Taylor, 2018). These structures often fail to recognise that knowledge production does not always culminate in an end product but can instead function as an ongoing, evolving inquiry (Bolt, 2007; Ingold, 2013).

The next section will examine whether academic institutions can engage meaningfully with uncertainty as an epistemic condition, exploring whether universities can move beyond assessment models predicated on resolution and instead develop research policies that validate knowledge in flux. This requires questioning whether academia can truly accept research that remains unfinalised, interactive, and conceptually indeterminate as a legitimate site of knowledge production.

Uncertainty as an Epistemic Condition and Its Implications for Research Validation

Uncertainty has historically been framed as a challenge to be overcome in academic research, often positioned as an obstacle to clarity, rigour, and methodological precision. Within institutional validation structures, research is expected to progress toward stability, resolution, and verifiable outcomes, reinforcing the assumption that knowledge is fixed, legible, and ultimately conclusive (Borgdorff, 2011; Sullivan, 2011). However, transdisciplinary, practice-led, and speculative research methodologies demonstrate that uncertainty is not merely an incidental phase of knowledge production but a necessary epistemic condition (Massey, 2005; Loveless, 2019).

In methodologies such as Practice as Research (PaR), design-led inquiry, and socially engaged research, meaning emerges through iterative cycles of failure, adaptation, and reconfiguration (Nelson, 2013; Haseman, 2006). These approaches position knowledge as contingent, relational, and process-driven, challenging the institutional preference for predefined research outcomes (Ingold, 2013; Rogoff, 2000). Uncertainty, in this sense, is not an indication of methodological weakness but an inherent characteristic of research that prioritises experimentation, reflexivity, and openness to unexpected insights (Taylor, 2018; Bolt, 2007).

Despite growing recognition of these methodologies, academic assessment structures remain resistant to epistemic uncertainty. Research validation continues to be predicated on textual articulation, replicability, and clearly defined contributions to knowledge (Rancière, 2009; Sullivan, 2011). If universities are to engage meaningfully with uncertainty as a legitimate research condition, they must move beyond models that equate research success with resolution and instead develop assessment frameworks that acknowledge knowledge as an evolving, iterative process. The following section explores whether academia is structurally capable of accommodating research that refuses fixity, advocating for assessment criteria that reflect the reality of knowledge in motion.

Can Academia Accommodate Research That Remains Fluid, Iterative, and Resistant to Resolution?

Despite growing acknowledgment of Practice as Research (PaR) and transdisciplinary inquiry, academia remains structured around assessment models that demand resolution, stability, and clear knowledge contributions (Borgdorff, 2011; Sullivan, 2011). These models struggle to accommodate research that is fluid, iterative, and resistant to finality, reinforcing text-centric validation frameworks that privilege explicit articulation over process-driven methodologies (Nelson, 2013; Rancière, 2009). The question remains: Can universities meaningfully engage with research that refuses epistemic closure?

Structural barriers to integrating uncertainty and process-driven research into academic validation frameworks include:

1. **Assessment Criteria** – Traditional evaluation methods prioritise final outputs over iterative processes, often requiring non-textual research to be supplemented by explanatory writing (Loveless, 2019; Taylor, 2018).
2. **Funding and Research Impact Models** – Institutions rely on research funding tied to quantifiable results, making it difficult to support projects that remain open-ended or speculative (Borgdorff, 2011; Sullivan, 2011).
3. **Epistemic Containment** – The need for disciplinary categorisation and research replicability discourages inquiry that evolves through failure, adaptation, and engagement with indeterminate knowledge (Massey, 2005; Rogoff, 2000).

If academia is to accommodate fluid, iterative research, it must redefine how success is measured. Assessment must shift from product-driven evaluation to process-based recognition, validating research as a continuously unfolding inquiry rather than a finite achievement (Haseman, 2006; Ingold, 2013). The next section examines whether alternative academic structures – such as speculative research laboratories, experimental learning environments, and cross-disciplinary knowledge networks – can provide institutional models that embrace uncertainty as a core epistemic principle.

Institutional Models That Embrace Uncertainty as a Core Epistemic Principle

If traditional academic structures struggle to accommodate research that remains fluid, iterative, and resistant to resolution, alternative institutional models must be considered – ones that embrace uncertainty as a fundamental epistemic principle rather than a methodological weakness (Borgdorff, 2011; Sullivan, 2011). Speculative research laboratories, experimental learning environments, and cross-disciplinary knowledge networks provide examples of institutional spaces where research is treated as an evolving inquiry rather than a finite product (Nelson, 2013; Loveless, 2019).

One example of such an approach is the speculative research laboratory, which foregrounds experimentation, emergent methodologies, and process-led inquiry (Rogoff, 2000; Massey, 2005). Unlike conventional university departments, these spaces function as knowledge incubators, where failure is not only expected but instrumental in generating insights. Similarly, experimental pedagogical models – such as those seen in design education and radical learning environments – position learning as a recursive, open-ended process, allowing students and researchers to engage with epistemic instability and iterative methodologies (Haseman, 2006; Ingold, 2013).

These models challenge the hierarchies of validation that govern traditional research assessment, asking whether universities can adopt policies that recognise research as inherently uncertain, relational, and in continuous transformation (Bolt, 2007; Rancière, 2009). If institutions are to meaningfully integrate these approaches, they must reconsider how impact, contribution, and knowledge production are framed within academia (Taylor, 2018). The next section explores what such a transformation might look like, questioning whether universities can operationalise uncertainty in ways that restructure assessment models, research funding, and institutional policies toward a more adaptive, responsive framework.

Operationalising Uncertainty Within Assessment Models, Research Funding, and Institutional Policies

If universities are to engage meaningfully with uncertainty as an epistemic condition, they must move beyond product-driven assessment models and develop institutional policies that reflect the iterative, speculative, and process-based nature of transdisciplinary research (Borgdorff, 2011; Sullivan, 2011). The challenge is not only methodological but structural – academic institutions have historically relied on stability, verifiability, and quantifiable outcomes to measure research success, creating barriers to the validation of unfinished, fluid, and participatory knowledge production (Nelson, 2013; Taylor, 2018).

One critical intervention involves restructuring research assessment models to prioritise process over conclusion. This could take the form of dynamic evaluation frameworks, where research is reviewed through periodic reflection, iterative documentation, and open-ended peer engagement, rather than being assessed solely on a fixed, final submission (Haseman, 2006; Loveless, 2019). Such models align with design-based and speculative research methodologies, where failure, adaptation, and methodological shifts are integral components of inquiry rather than deviations from research rigour (Bolt, 2007; Ingold, 2013).

Additionally, research funding structures must evolve to support speculative and process-driven inquiry. Traditional funding models favour research projects that promise clear deliverables, but speculative and experimental research often resists predefined outcomes. Universities could implement adaptive funding models, where research proposals are evaluated on their potential for iterative development, impact through engagement, and epistemic transformation rather than completion (Rancière, 2009; Rogoff, 2000).

The next section examines whether academia can sustain these structural shifts at scale, questioning whether universities are willing to adopt institutional policies that embrace contingency, methodological fluidity, and research as an ongoing, participatory dialogue rather than a finalised output.

Can Universities Sustain Large-Scale Structural Shifts Toward Uncertainty-Driven Research Validation?

If universities are to integrate uncertainty-driven research validation at scale, they must fundamentally alter the ways in which research is assessed, funded, and legitimised within institutional frameworks (Borgdorff, 2011; Sullivan, 2011). While speculative research laboratories, experimental learning environments, and transdisciplinary methodologies demonstrate that process-driven research can thrive in controlled academic spaces, the question remains: Can universities sustain these models beyond isolated case studies, embedding them into broader research policies?

The main challenge is that academic institutions are structurally designed for predictability and accountability, with research outcomes tied to government funding metrics, grant cycles, and global ranking systems (Nelson, 2013; Taylor, 2018). Process-led, iterative methodologies do not easily conform to these demands, as they resist fixed deliverables and instead foreground epistemic openness, methodological shifts, and speculative inquiry (Haseman, 2006; Rogoff, 2000). Large-scale adoption would require not only a reassessment of how research is measured and rewarded but also a cultural shift within universities themselves, repositioning knowledge production as an ongoing negotiation rather than a linear progression toward output-driven success (Bolt, 2007; Ingold, 2013).

One approach could involve the development of long-term, adaptive research initiatives, where projects are not judged on their ability to produce singular, finalised outcomes but on their capacity to generate continuous impact through engagement, iteration, and networked collaboration (Massey, 2005; Loveless, 2019). Such initiatives could redefine how research success is framed, shifting from product-based evaluation to process-based recognition. The following section explores whether these shifts can be meaningfully implemented within existing university governance models, or whether institutional inertia will ultimately prevent the widespread adoption of uncertainty as an epistemic principle.

Can University Governance Models Integrate Uncertainty-Driven Research at an Institutional Level?

While experimental research frameworks demonstrate that uncertainty-driven methodologies can thrive in controlled academic spaces, the broader question remains: Can university governance models accommodate these approaches at an institutional level? The governance structures of most universities are built upon hierarchical decision-making, outcome-driven assessment, and compliance with external funding bodies, all of which prioritise measurable outputs over process-led inquiry (Borgdorff, 2011; Sullivan, 2011). The integration of uncertainty as an epistemic principle would therefore require structural reforms that extend beyond individual research projects and into the policies, assessment models, and administrative processes that shape institutional decision-making (Nelson, 2013; Taylor, 2018).

One key challenge is the reliance on metrics-driven research evaluation systems, which assess impact based on publication output, citation rates, and predefined deliverables (Rancière, 2009; Rogoff, 2000). Process-driven methodologies, however, do not always align with these quantifiable benchmarks, as they foreground non-linear, recursive engagement rather than definitive conclusions (Haseman, 2006; Loveless, 2019). Universities would need to develop alternative governance structures that enable speculative, practice-led, and transdisciplinary research to be assessed on its own terms – recognising iterative cycles of inquiry, public engagement, and methodological adaptability as legitimate contributions to knowledge (Bolt, 2007; Ingold, 2013).

If governance models remain bound to traditional academic metrics, the widespread adoption of uncertainty-driven research may remain constrained to marginal institutional spaces, such as experimental research labs and creative faculties. The next section examines whether universities can operationalise epistemic openness at scale, or whether the institutional demand for measurable accountability will continue to limit the full integration of process-based methodologies within formal research assessment structures.

Epistemic Openness Be Operationalised at Scale Within Universities

The widespread integration of epistemic openness within universities requires more than theoretical endorsement; it demands systemic transformation in how research is assessed, funded, and institutionally supported. While transdisciplinary, speculative, and practice-led methodologies have gained legitimacy within specific faculties, research labs, and experimental learning environments, their application at scale remains constrained by bureaucratic structures that prioritise predefined outcomes, risk management, and quantifiable impact (Borgdorff, 2011; Sullivan, 2011). The question is not whether epistemic openness is possible within academia, but whether it can be sustained as a governing principle rather than as an exception (Nelson, 2013; Taylor, 2018).

One challenge in operationalising epistemic openness is the institutional reliance on research impact metrics, which demand measurable contributions to knowledge within fixed timeframes (Loveless, 2019; Rancière, 2009). Open-ended, process-driven methodologies resist these constraints, requiring longer-term, adaptive funding models that acknowledge knowledge as an evolving inquiry rather than a finalised output (Massey, 2005; Ingold, 2013). Universities that seek to embed epistemic openness at scale must therefore reconsider how research success is measured, shifting from static assessment criteria to frameworks that reward iteration, uncertainty, and methodological flexibility (Haseman, 2006; Rogoff, 2000).

If universities are to fully integrate uncertainty as a legitimate research condition, they must develop institutional policies that legitimise process-led methodologies across disciplines, rather than isolating them within experimental faculties. The next section explores whether academia is structurally capable of sustaining process-based research validation as part of its institutional core, or whether its governance models will continue to reinforce outcome-driven paradigms at the expense of epistemic adaptability.

Can Academia Sustain Process-Based Research Validation as an Institutional Norm Rather Than an Exception?

If epistemic openness and process-based research validation are to be sustained as institutional norms rather than isolated exceptions, universities must fundamentally rethink how knowledge production is structured, assessed, and legitimised. Current academic governance models continue to prioritise product-oriented research outputs, reinforcing a legacy of assessment based on measurable, finalised contributions (Borgdorff, 2011; Sullivan, 2011). While some institutions have begun experimenting with practice-led methodologies, iterative assessment frameworks, and transdisciplinary knowledge production, these approaches often remain contained within specific faculties or research clusters, rather than being adopted as a university-wide principle (Nelson, 2013; Taylor, 2018).

For process-based research validation to become an institutional norm, universities must develop policies that prioritise knowledge in motion rather than knowledge in conclusion (Haseman, 2006; Rancière, 2009). This requires:

1. Embedding iterative assessment models – recognising cycles of reflection, adaptation, and processual development rather than assessing research solely on its final outcomes (Massey, 2005; Rogoff, 2000).
2. Redefining academic impact – moving beyond citation metrics and fixed deliverables to include ongoing engagement, speculative inquiry, and emergent knowledge production (Loveless, 2019; Ingold, 2013).
3. Developing long-term funding structures – supporting research that unfolds over extended timeframes, allowing for methodological evolution, iterative prototyping, and participatory engagement (Bolt, 2007; Sullivan, 2011).

However, institutionalising uncertainty as a core epistemic principle requires not only structural policy reform but a cultural shift in how academia perceives research legitimacy. The following section considers whether universities are willing to dismantle entrenched knowledge hierarchies, or whether process-based methodologies will continue to be viewed as peripheral to dominant academic paradigms.

Universities Prepared to Dismantle Entrenched Knowledge Hierarchies in Favour of a Process-Based Research Culture

The integration of process-based research validation at an institutional level requires not only policy reform but a fundamental shift in the epistemic hierarchies that govern academic legitimacy. Historically, universities have positioned research as a linear progression toward stable, verifiable knowledge, reinforcing an assessment model that equates intellectual rigour with textual clarity, fixed methodologies, and conclusive findings (Borgdorff, 2011; Sullivan, 2011). This has marginalised research methodologies that foreground iteration, uncertainty, and speculative inquiry, forcing practice-led and transdisciplinary scholars to situate their work within explanatory frameworks that conform to dominant academic paradigms (Nelson, 2013; Taylor, 2018).

For universities to meaningfully embrace an open, process-based research culture, they must first dismantle the hierarchical structures that privilege textual knowledge over material, performative, and participatory epistemologies (Haseman, 2006; Rancière, 2009). This involves:

1. Reconfiguring research assessment models – ensuring that process-led methodologies are evaluated on their own terms rather than being forced into predefined academic formats (Massey, 2005; Rogoff, 2000).
2. Decentralising knowledge validation – moving beyond peer review as the dominant mechanism of research legitimacy to include participatory, community-driven, and publicly engaged assessment frameworks (Loveless, 2019; Ingold, 2013).
3. Legitimising open-ended inquiry – recognising that unresolved, speculative, and iterative research is not an epistemic failure but a methodological strength, one that requires adaptive institutional support (Bolt, 2007; Sullivan, 2011).

The question remains whether universities are structurally and ideologically capable of implementing these shifts, or whether the existing academic infrastructure will continue to reinforce epistemic containment at the expense of knowledge diversity. The following section considers the possibility of an academic model that fully embraces knowledge as an evolving, relational, and processual condition rather than a fixed, extractable commodity.

Can Academia Transition Toward a Model That Fully Embraces Knowledge as Relational and Evolving?

If universities are to transition toward a research model that fully embraces knowledge as relational, evolving, and processual, they must move beyond incremental reforms and instead commit to a fundamental rethinking of how research is structured, assessed, and legitimised (Borgdorff, 2011; Sullivan, 2011). While disciplines such as Practice as Research (PaR), design-led inquiry, and socially engaged methodologies have demonstrated the viability of open-ended, iterative, and participatory research, these approaches remain largely peripheral to dominant academic structures (Nelson, 2013; Taylor, 2018). The question is whether these methodologies can be scaled across institutions or whether they will continue to exist within limited experimental spaces that do not challenge the broader epistemic hierarchies of academia.

A transition toward relational and evolving knowledge structures would require universities to abandon the illusion of fixity – the assumption that research must lead to stable, extractable findings that can be measured, archived, and verified within traditional assessment frameworks (Haseman, 2006; Ingold, 2013). Instead, research must be recognised as an ongoing negotiation, where knowledge emerges through interaction, reflexivity, and the continuous engagement of multiple perspectives (Rogoff, 2000; Loveless, 2019).

For such a shift to be realised, institutions must expand beyond text-based assessment criteria, allowing material, spatial, and performative articulations of knowledge to stand as primary research outputs rather than requiring supplementary textual validation (Bolt, 2007; Rancière, 2009). The following section explores what such a model might look like in practice, questioning whether universities are willing to prioritise knowledge fluidity over the perceived security of fixed epistemic frameworks.

Towards a Fully Realised Relational and Evolving University Model

A university that fully embraces knowledge as relational, evolving, and processual would require more than surface-level reforms; it would necessitate a structural and epistemic transformation in how research is conducted, assessed, and institutionally supported (Borgdorff, 2011; Sullivan, 2011). This shift would mean moving away from fixed disciplinary boundaries and outcome-driven assessment models toward a framework that recognises research as an ongoing, interactive dialogue between methodologies, materials, and publics (Nelson, 2013; Taylor, 2018).

In practice, such a model would prioritise process over product, uncertainty over resolution, and engagement over containment. This could be realised through:

1. Fluid Research Structures – Instead of categorising knowledge into rigid disciplines, universities would establish interdisciplinary and transdisciplinary research environments that allow projects to evolve organically, without the expectation of predefined research outputs (Haseman, 2006; Massey, 2005).
2. Iterative Assessment Frameworks – Research would be evaluated through continuous peer dialogue, process-based reflection, and adaptive documentation, rather than through fixed submission deadlines and summative assessment (Loveless, 2019; Ingold, 2013).
3. Decentralised Knowledge Validation – Rather than relying on peer-reviewed textual articulation as the dominant marker of academic legitimacy, universities would accept multi-modal research portfolios, material prototypes, and performance-based inquiry as stand-alone contributions (Bolt, 2007; Rancière, 2009).

A relational and evolving university model would thus reframe academic knowledge as an open-ended, participatory, and co-constructed process, rather than as a system of hierarchical knowledge production. The next section considers the broader cultural and epistemic implications of such a transformation, questioning whether universities are willing to relinquish control over knowledge validation in favour of a more open, adaptive, and speculative framework.

Cultural and Epistemic Implications of Transitioning to an Open-Ended, Adaptive Research Framework

The transition toward an open-ended, adaptive research framework carries significant cultural and epistemic implications, requiring universities to rethink not only how knowledge is produced and assessed but also how it is valued within academic and societal contexts (Borgdorff, 2011; Sullivan, 2011). Moving beyond outcome-driven validation models toward process-led, iterative, and participatory inquiry represents a profound shift in how institutions define research legitimacy (Nelson, 2013; Taylor, 2018).

At the cultural level, this transition challenges long-standing academic traditions that equate authority with textual articulation, fixed methodologies, and conclusive findings (Haseman, 2006; Rogoff, 2000). If knowledge is understood as relational, co-constructed, and evolving, then universities must engage with multiple knowledge systems, including those that resist textual containment (Massey, 2005; Ingold, 2013). This raises critical questions about who has access to knowledge production, who determines what counts as valid research, and how institutions position themselves within broader social, cultural, and political discourses (Loveless, 2019; Rancière, 2009).

Epistemically, an adaptive research model necessitates a fundamental shift in assessment methodologies. Instead of measuring research through impact metrics, replicability, and fixed deliverables, universities would need to develop evaluation models that recognise failure, transformation, and unpredictability as integral to knowledge production (Bolt, 2007; Sullivan, 2011). This reorientation toward knowledge as an open-ended inquiry rather than a finalised product requires a shift from passive consumption to active engagement, both within institutional structures and broader research communities.

The next section examines whether universities are prepared to embrace such a shift, questioning whether the academic infrastructure can support epistemic pluralism, methodological flexibility, and a fundamental rethinking of research governance.

Universities Support Epistemic Pluralism and Methodological Flexibility at Scale

For universities to fully embrace epistemic pluralism and methodological flexibility, they must go beyond rhetorical commitments to interdisciplinarity and actively restructure how research is assessed, funded, and institutionally supported (Borgdorff, 2011; Sullivan, 2011). While transdisciplinary and practice-led research has gained legitimacy in arts, humanities, and design faculties, broader academic governance remains entrenched in disciplinary silos, outcome-driven evaluation models, and hierarchical knowledge validation structures (Nelson, 2013; Taylor, 2018). The question is whether these frameworks can be adapted at scale, or whether methodological flexibility will continue to be the exception rather than the norm (Loveless, 2019; Rancière, 2009).

One structural challenge is the institutional dependence on standardised research metrics, including citation indices, research income, and REF (Research Excellence Framework) impact assessments. These frameworks are designed to measure quantifiable research outputs, making them inherently misaligned with iterative, process-based, and speculative methodologies (Haseman, 2006; Rogoff, 2000). Universities seeking to integrate epistemic pluralism must develop alternative research assessment frameworks that acknowledge failure, transformation, and long-term engagement as legitimate research contributions (Massey, 2005; Ingold, 2013).

At the governance level, sustaining methodological flexibility requires a shift from static disciplinary structures to fluid, networked research environments. This means supporting collaborative knowledge production, experimental methodologies, and non-textual research outputs as part of institutional practice rather than positioning them as exceptional or supplementary to conventional academic models (Bolt, 2007; Sullivan, 2011). The next section examines whether academia can operationalise pluralistic research frameworks, or whether the pressures of accountability and institutional stability will ultimately limit their integration beyond niche academic spaces.

Can Academia Operationalise Pluralistic Research Frameworks at Scale Without Compromising Institutional Stability

For universities to successfully integrate pluralistic research frameworks at scale, they must navigate the tension between epistemic openness and institutional stability. While experimental methodologies thrive within small-scale research labs, interdisciplinary centres, and creative faculties, their expansion across larger university structures requires governance models that accommodate uncertainty, iterative processes, and non-linear knowledge production (Borgdorff, 2011; Sullivan, 2011). The challenge lies in whether universities can sustain methodological flexibility without disrupting the operational stability of research funding, institutional rankings, and academic governance (Nelson, 2013; Taylor, 2018).

One structural limitation is that universities remain bound to accountability frameworks designed for measurable, outcome-driven research. These include government funding assessments, industry partnerships, and accreditation systems, which prioritise research outputs that conform to predefined deliverables and impact metrics (Haseman, 2006; Massey, 2005). Pluralistic research frameworks, however, often resist these models, as they foreground knowledge emergence rather than resolution, process rather than product, and engagement rather than fixed articulation (Rogoff, 2000; Loveless, 2019). For universities to support pluralism without destabilising institutional structures, they must develop adaptive governance models that:

1. Expand definitions of research success – recognising methodological experimentation, failure, and ongoing inquiry as legitimate contributions to knowledge production (Bolt, 2007; Ingold, 2013).
2. Implement flexible funding models – allowing researchers to secure funding for iterative and speculative projects that do not guarantee fixed outcomes (Rancière, 2009; Sullivan, 2011).
3. Embed pluralism into long-term policy frameworks – ensuring that transdisciplinary, participatory, and speculative methodologies are supported at an institutional level rather than confined to niche academic spaces (Nelson, 2013; Taylor, 2018).

The next section questions whether academia is willing to embrace epistemic pluralism as a guiding principle for research, or whether traditional knowledge hierarchies will ultimately prevent universities from fully operationalising process-based methodologies at scale.

Academia Willing to Embrace Epistemic Pluralism as a Core Research Principle Rather Than a Marginal Exception?

The question of whether academia can embrace epistemic pluralism as a core research principle rather than a marginal exception is not simply a matter of policy reform; it requires a cultural and ideological shift in how knowledge is valued, legitimised, and institutionalised (Borgdorff, 2011; Sullivan, 2011). While many universities have incorporated transdisciplinary methodologies, speculative research labs, and practice-led inquiry, these initiatives often remain confined to experimental faculties, creative disciplines, or short-term funding programs (Nelson, 2013; Taylor, 2018). The challenge lies in whether pluralistic research models can become central to academic governance rather than existing as peripheral alternatives.

One major barrier is that epistemic pluralism directly challenges the hierarchical structures that govern knowledge validation within universities. Traditional academic frameworks are built on disciplinary specialisation, research reproducibility, and the authority of textual articulation, all of which reinforce a fixed and measurable definition of research legitimacy (Haseman, 2006; Massey, 2005). Pluralistic methodologies – particularly those that foreground process, iteration, and non-linear inquiry – require universities to abandon outcome-driven evaluation models in favour of fluid, adaptive research structures (Rogoff, 2000; Loveless, 2019).

For pluralism to move from exception to institutional norm, universities must be willing to:

1. Disrupt entrenched hierarchies of knowledge validation, allowing visual, material, and performative research to stand on its own terms rather than requiring supplementary textual justification (Bolt, 2007; Ingold, 2013).
2. Embed process-based methodologies into core academic policy, ensuring that iterative and experimental research is supported institutionally rather than treated as a niche approach (Rancière, 2009; Sullivan, 2011).
3. Rethink research success beyond fixed outcomes, legitimising failure, adaptation, and speculative inquiry as central epistemic practices rather than deviations from academic rigour (Nelson, 2013; Taylor, 2018).

The next section will explore whether universities can develop sustainable frameworks for embedding uncertainty, iteration, and pluralistic knowledge structures into academic governance, or whether the institutional demand for stability and accountability will continue to marginalise process-led methodologies.

Can Universities Develop Sustainable Frameworks for Embedding Uncertainty, Iteration, and Epistemic Pluralism into Long-Term Academic Governance?

For universities to fully integrate uncertainty, iteration, and epistemic pluralism into their long-term governance structures, they must move beyond short-term experimental initiatives and instead embed these methodologies within core academic policies, funding mechanisms, and research assessment frameworks (Borgdorff, 2011; Sullivan, 2011). While speculative research labs, transdisciplinary programs, and practice-led inquiry have demonstrated the potential of process-based methodologies, their sustainability is often limited by institutional inertia, funding constraints, and the dominance of outcome-driven validation models (Nelson, 2013; Taylor, 2018). The question remains: Can universities create lasting frameworks that legitimise fluid, iterative research as a foundational principle rather than an exception?

One of the key challenges is that academic institutions operate within external accountability structures, including government funding bodies, industry partnerships, and global ranking systems, all of which prioritise quantifiable research outputs over open-ended inquiry (Haseman, 2006; Massey, 2005). For epistemic pluralism to be sustained at scale, universities must develop:

1. Policy-driven support for iterative research – establishing institutional policies that recognise process-based inquiry as a valid research model, integrating it into tenure evaluations, research funding, and assessment metrics (Rogoff, 2000; Loveless, 2019).
2. Long-term funding models – shifting from project-based funding cycles to adaptive funding structures that allow research to unfold over extended periods without predefined outcomes (Bolt, 2007; Ingold, 2013).
3. Networked governance structures – adopting decentralised research validation models that prioritise collaborative knowledge production, multi-modal articulation, and public engagement (Rancière, 2009; Sullivan, 2011).

The next section explores whether universities are capable of moving beyond incremental adjustments toward a radical restructuring of knowledge governance, one that fully supports research as an evolving, non-hierarchical, and continuously negotiated process.

Universities Move Beyond Incremental Reforms Toward a Radical Restructuring of Knowledge Governance?

While universities have increasingly incorporated transdisciplinary research, practice-led methodologies, and speculative inquiry, these shifts have largely remained incremental rather than transformative. Institutional governance continues to be shaped by assessment metrics, funding structures, and disciplinary hierarchies that reinforce outcome-driven knowledge production (Borgdorff, 2011; Sullivan, 2011). The question is whether academia is capable of moving beyond minor adjustments toward a fundamental restructuring of knowledge governance – one that fully embraces epistemic pluralism, process-based methodologies, and open-ended research trajectories (Nelson, 2013; Taylor, 2018).

A truly radical restructuring would require universities to redefine the very mechanisms by which research is legitimised, evaluated, and disseminated. This involves:

1. Decentralising Research Validation – Moving away from rigid peer-review models and hierarchical disciplinary structures, allowing for networked, collaborative, and multi-modal research evaluation (Rancière, 2009; Massey, 2005).
2. Embedding Adaptive Governance Models – Creating institutional policies that prioritise knowledge in motion rather than knowledge in resolution, enabling long-term, iterative research projects that do not conform to predefined impact metrics (Haseman, 2006; Ingold, 2013).
3. Redefining Research Success – Shifting from fixed deliverables to ongoing engagement, recursive learning, and emergent impact, allowing universities to support research that unfolds over time rather than culminating in a singular output (Bolt, 2007; Loveless, 2019).

The next section questions whether academia has the institutional and political will to implement these systemic changes, or whether the demand for academic stability, financial accountability, and measurable research outcomes will continue to limit the transformative potential of open-ended, process-based methodologies.

Do Universities Have the Institutional and Political Will to Implement Systemic Epistemic Change?

The question of whether universities possess the institutional and political will to implement systemic epistemic change is not merely theoretical but deeply structural. While academic institutions increasingly engage with transdisciplinary methodologies, practice-led inquiry, and process-based research, these approaches are often accommodated rather than embedded within governance structures (Borgdorff, 2011; Sullivan, 2011). The result is a system where alternative epistemologies exist within controlled experimental spaces but fail to disrupt the broader institutional paradigms that define knowledge validation, research funding, and impact assessment (Nelson, 2013; Taylor, 2018).

A key challenge is that universities operate within external accountability frameworks, including government research funding bodies, global ranking systems, and industry partnerships, all of which rely on measurable outputs and predefined deliverables (Rancière, 2009; Massey, 2005). Process-led methodologies, speculative inquiry, and uncertainty-driven research do not easily conform to these demands, as they resist finality, quantification, and immediate applicability (Haseman, 2006; Ingold, 2013). Institutions that seek to implement systemic epistemic change must therefore confront deep-seated cultural and financial structures that prioritise stability, efficiency, and knowledge containment over intellectual risk-taking, failure, and iterative inquiry (Loveless, 2019; Rogoff, 2000).

For epistemic transformation to be realised, universities must develop governance models that legitimise uncertainty, interdisciplinarity, and non-traditional research outputs as integral to academic practice rather than as exceptions (Bolt, 2007; Sullivan, 2011). The next section questions whether such a shift is truly possible or whether the institutional demand for research predictability will ultimately prevent universities from fully embracing pluralistic, evolving knowledge structures at scale.

the Institutional Demand for Research Predictability Prevent Universities from Fully Embracing Process-Based Knowledge Structures

The integration of process-based, uncertainty-driven knowledge structures into university governance remains at odds with the institutional demand for research predictability. Academic institutions are deeply embedded within systems of accountability, funding, and assessment that prioritise measurable outcomes, making it difficult to sustain iterative, open-ended, and speculative research methodologies at scale (Borgdorff, 2011; Sullivan, 2011). While universities may claim to support transdisciplinary and experimental research, the reality is that research validation remains tied to fixed deliverables, predefined methodologies, and quantifiable impact metrics (Nelson, 2013; Taylor, 2018).

The demand for research predictability is driven by external pressures, including government funding policies, industry collaborations, and global ranking systems, all of which reinforce the expectation that academic research should be conclusive, replicable, and applicable within defined parameters (Massey, 2005; Rancière, 2009). Process-led methodologies that resist finality, linear progression, and explicit articulation struggle to gain institutional recognition because they challenge the very foundations of how universities measure knowledge production (Haseman, 2006; Loveless, 2019).

If universities are to truly integrate pluralistic, evolving knowledge structures, they must develop assessment frameworks that do not equate research legitimacy with predictability. This would require embracing adaptive research governance models that allow uncertainty, iteration, and participatory engagement to stand as valid research contributions rather than as supplementary deviations from standard academic practice (Bolt, 2007; Ingold, 2013). The next section considers whether universities can operationalise these epistemic shifts in ways that support both institutional sustainability and the radical openness required for process-driven inquiry.

Can Universities Balance Institutional Sustainability with the Radical Openness Required for Process-Driven Inquiry?

For universities to integrate process-driven inquiry while maintaining institutional sustainability, they must reconcile two seemingly opposing forces: the need for structural stability and the demand for epistemic openness. Research institutions operate within financial, bureaucratic, and policy-driven constraints, making it difficult to sustain methodologies that privilege iteration, uncertainty, and open-ended knowledge production (Borgdorff, 2011; Sullivan, 2011). Yet, the future of academic research depends on whether universities can balance these institutional imperatives with the flexibility required for pluralistic, evolving research models (Nelson, 2013; Taylor, 2018).

One challenge is that universities depend on external funding bodies that prioritise measurable outcomes, creating a structural bias toward predictable, impact-driven research (Massey, 2005; Rancière, 2009). To sustain process-led methodologies, universities must develop adaptive funding mechanisms that allow for speculative, iterative, and long-term research engagement without predefined outputs (Haseman, 2006; Loveless, 2019). Additionally, governance structures must move beyond static assessment criteria, instead recognising multi-modal research portfolios, material explorations, and participatory knowledge production as legitimate academic contributions (Bolt, 2007; Ingold, 2013).

If universities are to balance institutional sustainability with radical openness, they must redefine what constitutes research legitimacy. This requires shifting from a model based on certainty and verification to one that acknowledges knowledge as fluid, co-constructed, and continuously evolving (Rogoff, 2000). The following section examines whether such a shift is feasible within existing academic infrastructures or whether the deep-rooted need for research stability will continue to constrain the full integration of process-driven methodologies at scale.

Can Existing Academic Infrastructures Meaningfully Integrate Process-Driven Methodologies at Scale?

For process-driven methodologies to be fully integrated into academic infrastructures, universities must shift from outcome-oriented research validation to models that acknowledge knowledge production as fluid, iterative, and evolving (Borgdorff, 2011; Sullivan, 2011). While certain faculties – particularly in the arts, humanities, and design fields – have embraced transdisciplinary, speculative, and practice-led inquiry, the challenge remains whether these methodologies can be embedded at an institutional level rather than remaining confined to experimental or marginal academic spaces (Nelson, 2013; Taylor, 2018).

One of the core limitations of large-scale institutional integration is that academic governance remains aligned with external accountability structures, such as government funding agencies, research impact frameworks, and performance-based evaluation models (Massey, 2005; Rancière, 2009). These systems rely on standardised, replicable, and measurable knowledge production, making it difficult for research based on process, iteration, and uncertainty to achieve institutional validation (Haseman, 2006; Loveless, 2019). To fully integrate process-driven methodologies, universities must develop new assessment and governance structures that:

1. Expand research assessment frameworks – Recognising iterative research cycles, speculative inquiry, and participatory engagement as equally valid to outcome-based research (Bolt, 2007; Ingold, 2013).
2. Redesign funding models – Shifting from fixed-term project grants to flexible research funding that supports long-term, adaptive methodologies (Rogoff, 2000; Sullivan, 2011).
3. Institutionalise uncertainty – Legitimising failure, unpredictability, and open-ended inquiry as key epistemic principles rather than as deviations from research rigour (Nelson, 2013; Taylor, 2018).

The next section examines whether academia is willing to redefine its core epistemic foundations, or whether the need for research containment and quantifiable impact will continue to restrict the systemic adoption of fluid, process-led knowledge structures.

Is Academia Willing to Redefine Its Core Epistemic Foundations to Accommodate Evolving, Non-Hierarchical Research Models?

The possibility of academia redefining its core epistemic foundations to accommodate evolving, non-hierarchical research models requires more than policy adjustments – it demands a fundamental shift in how universities conceptualise knowledge production, authority, and validation (Borgdorff, 2011; Sullivan, 2011). At present, universities continue to operate within hierarchical, discipline-specific, and outcome-driven paradigms, where research legitimacy is determined by text-based articulation, peer-reviewed standardisation, and impact-driven assessment criteria (Nelson, 2013; Taylor, 2018). The question remains whether academia has the institutional flexibility and intellectual commitment to embed uncertainty, processuality, and methodological openness as guiding epistemic principles rather than as peripheral alternatives.

One of the greatest obstacles to systemic change is the deep institutional reliance on quantifiable research outputs, driven by funding structures, faculty evaluations, and global ranking systems (Haseman, 2006; Loveless, 2019). Open-ended, relational, and iterative methodologies challenge these structures by positioning research as an unfolding negotiation rather than a finalised product (Massey, 2005; Rogoff, 2000). For academia to fully embrace non-hierarchical research models, it must:

1. Dismantle rigid disciplinary silos – Fostering research environments where methodologies evolve across disciplines, rather than being confined to predefined academic categories (Bolt, 2007; Ingold, 2013).
2. Restructure tenure and faculty assessment models – Moving beyond citation-based performance indicators toward evaluative criteria that prioritise engagement, adaptation, and iterative research development (Rancière, 2009; Sullivan, 2011).
3. Legitimise knowledge emergence – Recognising incomplete, speculative, and process-led research as epistemically valuable, rather than subordinating it to text-based explanatory frameworks (Nelson, 2013; Taylor, 2018).

The next section explores whether such a transformation is realistically achievable within current academic governance structures, or whether the inertia of existing institutional frameworks will continue to limit the widespread adoption of process-led methodologies.

Academia Realistically Implement These Transformations Within Existing Governance Structures?

The question of whether academia can realistically implement process-driven, uncertainty-embracing research models within existing governance structures is not merely one of policy adaptation but of structural and ideological transformation. Universities operate within institutional frameworks designed to standardise knowledge production, ensure research accountability, and align with external funding and impact assessment systems (Borgdorff, 2011; Sullivan, 2011). These structures reinforce outcome-driven validation models, making it difficult for methodologies that prioritise iteration, non-linearity, and epistemic uncertainty to be fully integrated at scale (Nelson, 2013; Taylor, 2018).

One of the primary barriers to transformation is that academic governance is built upon stability and predictability, ensuring that research funding, tenure policies, and faculty assessment models align with measurable deliverables (Haseman, 2006; Massey, 2005). Large-scale reform would require universities to:

1. Redesign research assessment models – Moving beyond citation metrics and static deliverables to embrace adaptive, iterative, and participatory research evaluation (Rogoff, 2000; Loveless, 2019).
2. Develop institutional flexibility – Shifting from fixed-term, impact-driven research grants to long-term, process-based funding structures that allow for ongoing methodological adaptation (Bolt, 2007; Ingold, 2013).
3. Challenge the dominance of disciplinary silos – Supporting transdisciplinary knowledge production through decentralised governance models that recognise fluid, evolving methodologies as legitimate research contributions (Rancière, 2009; Sullivan, 2011).

The next section explores what systemic interventions are required to ensure the long-term sustainability of these models, asking whether universities can develop scalable, institutionalised frameworks for supporting knowledge pluralism, uncertainty, and emergent research methodologies.

What Systemic Interventions Are Needed to Ensure the Long-Term Sustainability of Process-Led Research Models

For process-led research models to be sustainable beyond isolated case studies and experimental faculties, universities must implement systemic interventions that structurally embed uncertainty, iteration, and epistemic pluralism into academic governance (Borgdorff, 2011; Sullivan, 2011). These interventions must address policy, funding, and assessment frameworks, ensuring that practice-led, speculative, and open-ended research is institutionally recognised rather than marginalised within traditional outcome-driven paradigms (Nelson, 2013; Taylor, 2018).

One of the most critical interventions involves the reconfiguration of research assessment criteria. Current models prioritise quantifiable outcomes, replicability, and textual articulation, reinforcing an epistemic hierarchy where process-based research remains supplementary to more traditional methodologies (Haseman, 2006; Massey, 2005). Instead, universities must develop iterative assessment frameworks that:

1. Legitimise processual knowledge – ensuring that failure, revision, and emergent methodologies are recognised as valid epistemic contributions (Bolt, 2007; Ingold, 2013).
2. Diversify research validation structures – moving beyond peer-reviewed publications as the dominant measure of academic impact to incorporate multi-modal portfolios, collaborative methodologies, and participatory research outputs (Rancière, 2009; Sullivan, 2011).
3. Implement adaptive funding policies – shifting from fixed-term, deliverable-driven research grants to flexible funding mechanisms that allow research to evolve over extended timeframes (Rogoff, 2000; Loveless, 2019).

Without these systemic interventions, process-led methodologies will continue to exist in marginal institutional spaces rather than becoming central to academic governance. The next section considers the broader implications of embracing epistemic uncertainty, questioning whether academia is prepared to shift toward an open, evolving model of research or whether institutional inertia will maintain the dominance of traditional knowledge hierarchies.

Broader Implications of Embracing Epistemic Uncertainty as a Defining Principle of Academic Research

If academia is to fully embrace epistemic uncertainty as a defining principle of research, it must move beyond accommodating iterative methodologies as experimental exceptions and instead redefine how knowledge is produced, assessed, and institutionalised (Borgdorff, 2011; Sullivan, 2011). This shift has profound implications – not only for universities as research institutions but for the broader intellectual, political, and economic structures that shape higher education (Nelson, 2013; Taylor, 2018).

At an epistemic level, recognising uncertainty, failure, and methodological fluidity as legitimate research conditions challenges the historical privileging of stability, verification, and outcome-driven inquiry (Haseman, 2006; Massey, 2005). Knowledge production would no longer be measured solely by its ability to generate definitive conclusions but by its capacity to evolve, provoke, and transform (Rancière, 2009; Ingold, 2013).

Institutionally, this requires a shift from product-based research models to open-ended, recursive engagement frameworks that recognise speculative inquiry, participatory methodologies, and cross-disciplinary experimentation as central to academic knowledge production (Rogoff, 2000; Loveless, 2019). The challenge, however, is whether universities can sustain institutional legitimacy while simultaneously destabilising the very structures upon which they have historically relied for authority, funding, and governance (Bolt, 2007; Sullivan, 2011).

The final section considers whether academia is truly at an inflection point – capable of embedding pluralistic, process-led research models within its core institutional policies – or whether traditional paradigms of knowledge containment will ultimately prevail, reinforcing fixed epistemic hierarchies at the expense of evolving research practices.

Is Academia at an Inflection Point Between Epistemic Transformation and Institutional Inertia?

As universities navigate the tensions between process-led research methodologies and institutional governance, they find themselves at a critical inflection point – one that will determine whether academia can fully embrace epistemic transformation or whether the weight of institutional inertia will reinforce traditional knowledge hierarchies (Borgdorff, 2011; Sullivan, 2011). The increasing recognition of iterative, participatory, and speculative research methodologies suggests that academia is moving toward a pluralistic knowledge framework, yet systemic barriers remain, threatening to confine these methodologies to marginal spaces within higher education (Nelson, 2013; Taylor, 2018).

On one side, there is momentum toward openness, methodological experimentation, and epistemic pluralism. The rise of transdisciplinary research centres, speculative inquiry labs, and process-driven assessment models signals a shift away from static, outcome-driven validation frameworks (Haseman, 2006; Loveless, 2019). Universities that support uncertainty as an epistemic principle are fostering new modes of knowledge production that value engagement, adaptation, and transformation over finality (Massey, 2005; Rancière, 2009).

Yet, institutional inertia continues to reinforce legacy structures that prioritise textual articulation, disciplinary containment, and quantifiable impact metrics (Bolt, 2007; Ingold, 2013). If epistemic transformation is to be sustained at scale, universities must commit to structural reform, embedding iterative research models, flexible assessment criteria, and non-hierarchical governance frameworks within their academic policies (Rogoff, 2000; Sullivan, 2011).

The question remains whether academia is ready to relinquish control over knowledge validation in favour of an evolving, open-ended epistemic framework, or whether it will continue to accommodate methodological innovation only within the limits of traditional research structures, ensuring that uncertainty remains an exception rather than a foundation for academic inquiry.

Summary and Closing Reflections – The Future of Epistemic Pluralism in Academia

The question of whether academia can meaningfully integrate epistemic pluralism, process-led methodologies, and uncertainty-driven research is not simply a matter of policy reform but a fundamental epistemological and institutional challenge. This discussion has traced the structural, political, and methodological tensions that define this challenge, highlighting both the momentum toward knowledge plurality and the institutional inertia that continues to prioritise fixed, measurable research outputs (Borgdorff, 2011; Sullivan, 2011).

At its core, this debate reflects a larger philosophical tension within academia: the desire for methodological openness, interdisciplinarity, and speculative inquiry versus the institutional need for stability, accountability, and research predictability (Nelson, 2013; Taylor, 2018). Universities that have embraced iterative, process-led methodologies – through transdisciplinary research hubs, speculative inquiry labs, and practice-led PhD programs – demonstrate that epistemic transformation is possible (Haseman, 2006; Massey, 2005). However, these shifts remain largely peripheral, as governance structures continue to reinforce hierarchical research validation, outcome-driven funding models, and discipline-specific assessment criteria (Rogoff, 2000; Loveless, 2019).

For academia to fully transition toward a model of knowledge production that is relational, evolving, and process-based, institutions must commit to long-term structural change. This includes decentralising research validation, embedding iterative assessment models, and redefining research impact beyond quantifiable deliverables (Bolt, 2007; Ingold, 2013). Whether such a shift is realistically achievable at scale remains uncertain. What is clear, however, is that methodological pluralism and epistemic openness are no longer radical propositions – they are essential to the future of academic inquiry (Rancière, 2009; Sullivan, 2011). The question is no longer whether universities can integrate these approaches, but whether they will.

Concluding Call to Action – Next Steps for Universities in Embracing Epistemic Pluralism

If universities are to fully embrace epistemic pluralism, process-driven methodologies, and iterative knowledge production, they must move beyond symbolic acknowledgments of transdisciplinarity and commit to institutional transformation. The challenge is not simply to accommodate speculative, practice-led, and participatory research but to embed these approaches within the structural foundations of academia itself (Borgdorff, 2011; Sullivan, 2011). This requires universities to take concrete steps toward reconfiguring research assessment, governance models, and funding structures (Nelson, 2013; Taylor, 2018).

To facilitate this shift, universities should:

1. Develop iterative assessment frameworks – Replacing static, product-driven evaluation models with process-based assessment criteria that value failure, adaptation, and long-term inquiry (Haseman, 2006; Loveless, 2019).
2. Redefine research success – Moving beyond publication metrics and quantifiable deliverables to include impact through engagement, methodological experimentation, and epistemic transformation (Massey, 2005; Ingold, 2013).
3. Establish adaptive funding models – Shifting from fixed-term, impact-driven research grants to long-term funding structures that allow for non-linear knowledge production and emergent methodologies (Rogoff, 2000; Rancière, 2009).
4. Decentralise knowledge validation – Expanding peer review structures to accommodate multi-modal research portfolios, visual documentation, and participatory methodologies as legitimate academic contributions (Bolt, 2007; Sullivan, 2011).

The future of academic research depends on whether universities are willing to challenge their own epistemic foundations. This is not merely an institutional issue but an ontological one – how do we define knowledge, and who decides what is valid? If universities fail to act, they risk reinforcing intellectual hierarchies that constrain rather than expand knowledge production. The time for incremental change has passed – epistemic transformation must become an institutional imperative.

Reflections – Imagining the Future of Research in a Pluralistic and Process-Led Academy

If universities fully commit to epistemic pluralism, methodological flexibility, and process-driven inquiry, the future of research will no longer be defined by rigid disciplinary boundaries, outcome-driven validation models, or static assessment criteria. Instead, academic institutions would become spaces of continuous negotiation, knowledge co-production, and experimental engagement, where inquiry is not constrained by the demand for certainty but is guided by openness, adaptation, and transformation (Borgdorff, 2011; Sullivan, 2011).

A research environment that fully embraces uncertainty and iterative knowledge production would not only shift how universities operate but would also transform the very nature of academic inquiry. Scholars would have the freedom to engage in long-term, speculative projects without the pressure of predefined deliverables, and research assessment would prioritise the intellectual and societal impact of evolving ideas rather than the production of fixed outputs (Nelson, 2013; Taylor, 2018). This shift would require institutions to move beyond hierarchical, discipline-bound validation systems toward a model where knowledge is understood as an evolving process rather than a fixed commodity (Haseman, 2006; Ingold, 2013).

In this future academy, research would be assessed not by its conclusion but by its contribution to knowledge emergence – whether through material experimentation, collaborative engagement, or speculative methodologies (Rancière, 2009; Loveless, 2019). Universities that embrace this approach would become more resilient, responsive, and capable of addressing complex global challenges, moving beyond rigid research paradigms into an era of intellectual adaptability, radical interdisciplinarity, and open-ended epistemic inquiry (Rogoff, 2000; Massey, 2005).

The question remains: Is academia ready to take this leap, or will it continue to reinforce knowledge containment at the expense of intellectual and methodological transformation?

Afterword – The Urgency of Epistemic Transformation in Academia

The future of academic research depends on whether universities are willing to redefine the boundaries of knowledge production, assessment, and institutional governance. As this discussion has demonstrated, the tension between epistemic pluralism and institutional stability is not an abstract issue – it is a fundamental challenge that will shape the future of higher education (Borgdorff, 2011; Sullivan, 2011).

For too long, academic institutions have functioned as gatekeepers of legitimacy, reinforcing hierarchical knowledge validation models that prioritise text-based articulation, outcome-driven assessment, and disciplinary containment (Nelson, 2013; Taylor, 2018). Yet, as transdisciplinary, speculative, and practice-led methodologies continue to gain traction, the limits of these structures are becoming increasingly visible (Haseman, 2006; Rogoff, 2000). Universities now stand at a crossroads: they can either adapt to the evolving landscape of research by embedding uncertainty, iteration, and participatory inquiry into their governance models, or they can continue to uphold frameworks that constrain rather than expand the possibilities of knowledge production (Massey, 2005; Ingold, 2013).

The urgency of this transformation cannot be overstated. In a world of rapid technological change, socio-political instability, and ecological crisis, research must be adaptive, responsive, and capable of engaging with complexity (Bolt, 2007; Loveless, 2019). The task ahead is not merely to accommodate alternative research methodologies but to fundamentally reimagine what knowledge is, how it is produced, and who has the authority to define its value (Rancière, 2009; Sullivan, 2011).

The question is no longer whether universities can support epistemic transformation but whether they will. The time for incremental reform has passed – the future of academia depends on its willingness to embrace knowledge in motion.

The Significance of Epistemic Transformation in Academia

The challenges explored in this discussion are not confined to a single discipline, institution, or research methodology; they reflect a broader shift in academic and intellectual culture. As universities navigate the tensions between stability and transformation, containment and openness, tradition and innovation, the question of how knowledge is produced, legitimised, and sustained remains central to broader academic debates in higher education policy, research assessment, and institutional governance (Borgdorff, 2011; Sullivan, 2011).

The urgency of this transformation extends beyond academic structures. In a time when global crises demand new ways of thinking, interdisciplinary collaboration, and adaptive methodologies, universities cannot afford to reinforce rigid knowledge hierarchies at the expense of intellectual pluralism and methodological experimentation (Nelson, 2013; Taylor, 2018). If higher education is to remain relevant, it must embrace open-ended inquiry, recursive knowledge-making, and research that does not seek to stabilise meaning but instead expands the possibilities of understanding (Haseman, 2006; Massey, 2005).

The ideas presented here are intended not as a final argument but as an invitation to further dialogue, experimentation, and institutional action. The real work of epistemic transformation lies in the willingness of universities, researchers, and policymakers to move beyond symbolic commitments to interdisciplinarity and practice-led research and toward concrete structural changes that allow for uncertainty, iteration, and participatory knowledge production at scale (Bolt, 2007; Ingold, 2013).

Whether academia rises to this challenge remains uncertain. What is clear, however, is that the future of research cannot be built on static foundations – it must be adaptive, emergent, and responsive to the complexities of the world it seeks to understand (Rogoff, 2000; Loveless, 2019).

Acknowledgments – Recognising the Scholars, Institutions, and Research Initiatives That Have Shaped This Discussion (250–300 words, with academic tone and scholarly appreciation)

The ideas explored in this discussion are indebted to the work of scholars, institutions, and research initiatives that have critically examined the role of uncertainty, iteration, and transdisciplinary inquiry in knowledge production. Their contributions have provided the theoretical and methodological foundation for rethinking how universities might embrace epistemic pluralism and process-driven research models at scale.

I extend deep appreciation to Robin Nelson, Henk Borgdorff, and Estelle Barrett, whose work on Practice as Research (PaR) has critically expanded how research is defined beyond traditional textual articulations. Their scholarship has played a pivotal role in positioning creative, material, and performative inquiry as central, rather than peripheral, to academic knowledge production (Borgdorff, 2011; Nelson, 2013; Barrett, 2010).

Additionally, the work of Brad Haseman, Kathleen Coessens, and Graeme Sullivan has been instrumental in advocating for process-led, iterative methodologies within arts-based research, speculative inquiry, and practice-led innovation (Haseman, 2006; Coessens, 2009; Sullivan, 2011). Their engagement with methodological openness, recursive research cycles, and participatory knowledge-making has significantly influenced this discussion.

A special acknowledgment goes to Angus Pryor, whose work has actively contributed to the discourse on artistic research, interdisciplinary practice, and the institutionalisation of practice-led methodologies. His insights into the relationship between creative practice, academic structures, and research validation have provided valuable perspectives on the challenges and possibilities of integrating non-traditional research methodologies within the university system.

I also acknowledge the contributions of Doreen Massey, Irit Rogoff, and Brian Holmes, whose critical perspectives on institutional epistemologies, spatialised knowledge, and counter-mapping practices have informed the discussion on how universities might resist epistemic containment and move toward fluid, networked knowledge structures (Massey, 2005; Rogoff, 2000; Holmes, 2008).

Furthermore, this work has been shaped by university initiatives such as the Senselab (Concordia University), the Open Humanities Lab (Cambridge University), and speculative research collectives such as The Situated Knowledges Research Group (Goldsmiths, University of London). These institutions and initiatives have actively explored alternative research validation models, non-linear methodologies, and transdisciplinary forms of knowledge articulation.

Finally, I extend gratitude to the wider community of artists, researchers, educators, and theorists who continue to challenge the boundaries of academic inquiry, advocating for a more open, adaptive, and inclusive epistemic future. Their work ensures that uncertainty and processual knowledge-making remain vital forces within higher education.

Expanded Bibliography & Further Reading

The following bibliography includes key texts, institutions, and research centres that have contributed to discussions on epistemic pluralism, process-led methodologies, and transdisciplinary research validation. These sources provide critical perspectives on Practice as Research (PaR), speculative inquiry, and institutional transformation in higher education.

Academic References

Barrett, E. & Bolt, B. (Eds.). (2010). *Practice as Research: Approaches to Creative Arts Enquiry*. London: I.B. Tauris.

Borgdorff, H. (2011). *The Production of Knowledge in Artistic Research*. In Biggs, M. & Karlsson, H. (Eds.), *The Routledge Companion to Research in the Arts* (pp. 44–63). London: Routledge.

Bolt, B. (2007). *The Magic Is in Handling*. In Barrett, E. & Bolt, B. (Eds.), *Practice as Research: Approaches to Creative Arts Enquiry* (pp. 27–34). London: I.B. Tauris.

Coessens, K., Crispin, D., & Douglas, A. (2009). *The Artistic Turn: A Manifesto*. Ghent: Leuven University Press.

Haseman, B. (2006). *A Manifesto for Performative Research*. *Media International Australia Incorporating Culture and Policy*, 118(1), 98–106.

Ingold, T. (2013). *Making: Anthropology, Archaeology, Art and Architecture*. London: Routledge.

Loveless, N. (2019). *How to Make Art at the End of the World: A Manifesto for Research-Creation*. Durham: Duke University Press.

Massey, D. (2005). *For Space*. London: Sage.

Nelson, R. (2013). *Practice as Research in the Arts: Principles, Protocols, Pedagogies, Resistances*. London: Palgrave Macmillan.

Pryor, A. (2015). *Still Small Voice: An Exhibition on Art and Theology*. Cheltenham: University of Gloucestershire.

Rancière, J. (2009). *The Emancipated Spectator*. London: Verso.

Rogoff, I. (2000). *Terra Infirma: Geography's Visual Culture*. London: Routledge.

Sullivan, G. (2011). *Art Practice as Research: Inquiry in the Visual Arts* (2nd ed.). Los Angeles: SAGE Publications.

Taylor, D. (2018). *Performative Research as Methodology: Epistemological Positions and their Implications*. *RIDE: Research in Drama Education*, 23(2), 214–231.

Institutional and Research Initiatives

The following institutions and research groups have actively contributed to the development of practice-led research, transdisciplinary inquiry, and process-driven knowledge production. These initiatives explore alternative research validation models, non-linear methodologies, and speculative approaches to knowledge-making.

Research Centres Focused on Practice-Led and Transdisciplinary Inquiry

~~Senselab, Concordia University (Canada) — A laboratory for research-creation that integrates philosophy, artistic practice, and speculative inquiry (until 2019).~~

~~Open Humanities Lab, Cambridge University (UK) — An initiative exploring experimental humanities, critical theory, and post-disciplinary research models. (now <https://www.crassh.cam.ac.uk/> ?)~~

~~Situated Knowledges Research Group, Goldsmiths, University of London (UK) — A collective investigating alternative research validation models and process-led methodologies.~~

Centre for Research in the Arts, Social Sciences, and Humanities (CRASSH), University of Cambridge (UK) – A hub for interdisciplinary research and methodological innovation.

The Creative Research Methods Group, University of Edinburgh (UK) – Focuses on the role of creative practice in knowledge production and research methodology. Now the BINKS hub (check)

<https://efi.ed.ac.uk/event/the-binks-hub-creative-research-methods-reading-group-2/>

Transdisciplinary Research Exchange, University of Bristol (UK) – A network facilitating cross-disciplinary collaborations and methodological experimentation.

<https://www.bristol.ac.uk/brigstow/> Brigstow Institute

The Bartlett School of Architecture, University College London (UK) – A leader in design-led, practice-based research methodologies in spatial and architectural inquiry.

Initiatives That Have Challenged Traditional Knowledge Validation Models

Practice as Research in Performance (PARIP), University of Bristol (UK) – One of the earliest academic projects legitimising performance-based research within UK academia.

The Future of Research-Creation Project, McGill University (Canada) – An initiative examining the integration of practice-led research within university funding and assessment frameworks (2011 – 2019? Check - <https://icasc.ca/the-asc-research-project-final-report-is-out/>).

Praxis Remix

The Radical Methodologies Conference, Royal College of Art (UK) – A forum exploring alternative research methodologies, speculative epistemologies, and knowledge beyond academic containment. (See <https://www.rca.ac.uk/research-innovation/projects/radical-matter-research-protocol-centre/>)

These research centres and initiatives (past and present – and sometimes poorly documented!) demonstrate that the debate surrounding epistemic pluralism and process-led research is already well-established within certain academic spaces. The challenge remains whether universities will scale these approaches beyond experimental contexts, embedding them within the core governance of knowledge production.