Institutional isomorphism, artificial intelligence, and the structural production of dysfunction in South African higher education

R. Dhunpath
School of Education
University of KwaZulu-Natal
Durban, South Africa
https://orcid.org/0000-0001-8900-5024

ABSTRACT

South African universities share strikingly convergent patterns of institutional dysfunction: governance failures, financial mismanagement, leadership volatility, and the decoupling of policy aspiration from organisational practice. This is prevalent across institutions with profoundly different historical formations, resource endowments, and geographic locations. This article proposes that such convergence is neither coincidental nor solely explicable by apartheid-era inheritance or individual leadership failure. Drawing on DiMaggio and Powell's neo-institutional theory of isomorphism, the article argues that coercive, mimetic, and normative isomorphic processes structurally produce and reproduce the conditions for dysfunction, by compelling universities to adopt similar forms and institutional structures in pursuit of legitimacy, rather than pedagogic performance. Having established this analytical foundation, the article then extends the theoretical argument by examining how artificial intelligence (AI) is likely to intensify, accelerate, and technically embed each of the three isomorphic mechanisms, while simultaneously obscuring them within algorithmic infrastructure that is largely invisible to institutional actors. The analysis builds on the concept of the "algorithmic iron cage" to describe the condition in which isomorphic logics cease to be merely social pressures and become technical constraints inscribed into the systems universities use to manage admissions, assessment, research metrics, and academic integrity. In the South African context, AI-driven isomorphism carries a further dimension: the mimetic adoption of AI models and frameworks built on Global North data reproduces colonial epistemic hierarchies in technical form, constituting what the article terms "colonial isomorphism 2.0." The analysis concludes by arguing that genuinely counter-isomorphic AI deployment, rather than the legitimacy-driven adoption of AI-as-spectacle, is among the most urgent challenges facing South African higher education policy and institutional leadership.

Keywords: institutional isomorphism, artificial intelligence, higher education, decoupling, algorithmic governance, new institutionalism, colonial isomorphism

INTRODUCTION

This article extends the argument advanced in my earlier publication, “Traversing Paradoxes: An Autoethnographic Inquiry into Systemic Dysfunction in South African Higher Education”

*(*Dhunpath, 2026*),* wherein I traced the roots of recurrent crises afflicting certain South African universities. As the point of departure, the article alludes to the fact that between 2012 and 2025, no fewer than five public universities were placed under ministerial administration. This is the most severe form of governmental intervention permitted under the Higher Education Act (No. 101 of 1997). Strikingly, both historically disadvantaged and previously advantaged institutions shared this fate, each exhibiting remarkably similar pathologies: paralysed governance, fractious councils, executive misconduct, financial irregularities, and the collapse of academic programmes under the weight of institutional crisis (Jansen, 2023). This convergence of dysfunction across structurally dissimilar institutions presents a profound explanatory puzzle. Conventional deficit models that attribute failure to individual leadership shortcomings, resource scarcity narratives, or invocations of apartheid inheritance prove insufficient to account for the systemic nature of these crises. The persistence of such pathologies across diverse institutional contexts suggests the need for more nuanced theoretical lenses capable of interrogating the deeper structural and normative dynamics that underpin dysfunction in South African higher education[1].

Why, despite decades of post-apartheid policy reform, significant state investment in institutional redress, and sustained attention from the Department of Higher Education and Training (DHET), do South African universities reproduce broadly similar organisational dysfunctions (Habib 2019). Why do ambitious transformation policies, however well-designed at the level of legislation, routinely fail to penetrate organisational practice, producing instead what is tantamount to a theatre of compliance (Scott, 1990)? And why do institutions that ostensibly compete with each other for students, funding, and talent converge toward structurally similar responses to their environment rather than developing the differentiated responses their distinct missions might suggest? (Jansen, 2023).

This article contends that these questions are best examined through the lens of neo-institutional sociology of organisations, particularly DiMaggio and Powell's (1983) theory of institutional isomorphism. This framework provides a rigorous account of how structural convergence can occur even in the absence of explicit coordination or collusion, and how organisations that appear legitimate, may nonetheless prove dysfunctional in their core

[1] The analysis excludes private providers such as Educor, leading to repeated deregistration of its flagship colleges: Damelin, CityVarsity, ICESA City Campus, and Lyceum College by the Department of Higher Education and Training (DHET) for non-compliance, poor academic quality, and non-payment of staff. More recently the College of Cape Town was placed under administration by the Minister of Higher Education.

technical functions. The argument is then extended into terrain that DiMaggio and Powell could not have anticipated: the emergence of artificial intelligence as a powerful institutional force within higher education. Does AI simply add another layer of pressure to an already isomorphic field, or does it accelerate and intensify these dynamics by embedding coercive, mimetic, and normative mechanisms within technical systems that progressively displace them from conscious institutional deliberation? Cheng's (2025) notion of the "algorithmic iron cage" may illuminate this condition, a second-order enclosure nested within Weber's original, whose bars are inscribed not in bureaucratic regulation but in code.

The article's theoretical contribution extends beyond the transposition of DiMaggio and Powell's framework into a new empirical setting. It advances two original conceptual innovations. First, *algorithmic isomorphism*: the qualitative transformation that occurs when isomorphic logics migrate from the social and normative sphere into technical infrastructures, thereby becoming less perceptible and markedly more resistant to intentional institutional redirection. Second, *colonial isomorphism 2.0*: the perpetuation, through AI systems trained predominantly on Global North datasets, of epistemic hierarchies that post-apartheid policy has formally sought to dismantle. Together, these conceptual interventions expand the isomorphism literature into areas it has not previously explored.

The article unfolds in five movements. The second section elaborates the theoretical framework of institutional isomorphism. The third section situates each isomorphic mechanism within the South African higher education landscape. The fourth section, serving as the analytical core, interrogates how artificial intelligence is poised to reshape these mechanisms and elaborates the notion of the algorithmic iron cage. The fifth section synthesises the broader theoretical implications, addressing both the legitimacy–performance paradox and the uniquely South African dimension of colonial isomorphism 2.0. Finally, the concluding section reflects on the implications of this analysis for those committed to cultivating a differentiated, responsive, and genuinely effective higher education system

THEORETICAL FOUNDATIONS: INSTITUTIONAL ISOMORPHISM

To understand why South African universities converge on similar forms of dysfunction, we need a theoretical framework capable of explaining why organisations that differ markedly in history, resources, and purpose can nonetheless end up resembling one another in structure, procedure, and even failure. Institutional isomorphism provides an explanatory framework.

The theory emerged from a critique in organisational sociology during the late 1970s. Prior theories assumed that organisations take the shapes they do primarily because those shapes make them more efficient and that rational decision-making and competitive pressure would,

over time, drive institutions toward whatever arrangements work best. Scholars such as Meyer and Rowan (1977), Zucker (1977), and DiMaggio and Powell (1983) fundamentally unsettled the prevailing assumption that organisational structures are primarily determined by efficiency or performance imperatives. They argued instead, that organisations are shaped, above all, by the pursuit of legitimacy in the eyes of influential audiences, including governments, funding agencies, professional associations, and peer institutions. In this view, organisations do not merely adapt to market pressures; they respond to institutional environments composed of rules, norms, cultural expectations, and taken-for-granted assumptions about what a "proper" organization should resemble. By adopting the appropriate structures, procedures, and vocabularies, organisations secure credibility and access to resources, regardless of whether such arrangements enhance their actual effectiveness. This suggests that legitimacy and performance are distinct, and that the quest for the former may even undermine the latter, and provides the conceptual foundation for the arguments developed in this article.

DiMaggio and Powell's (1983) seminal essay, *The Iron Cage Revisited*, advanced this line of argument by introducing the concept of the *organisational field*: the constellation of organisations that collectively define a recognisable domain of institutional life, encompassing suppliers, resource providers, regulatory agencies, and peer institutions engaged in similar activities (p. 148). Universities, for instance, do not function in isolation; they operate within a field structured by governments, quality assurance bodies, professional associations, and by their relationships with one another. Within such fields, patterns of interaction and channels of information exchange generate structures of influence that exert powerful pressures toward homogeneity. DiMaggio and Powell identified three distinct mechanisms through which this convergence is achieved. They theorised this phenomenon as *isomorphism*, meaning literally "taking the same form".

Coercive isomorphism arises from the formal and informal pressures exerted on organisations by those upon whom they depend. When the state attaches conditions to funding, when legislation mandates particular governance structures, or when a regulatory body prescribes standards of compliance, organisations conform, not necessarily because these arrangements are most effective for their particular context, but because non-compliance carries costs they cannot afford. In higher education, funding formulae, quality assurance requirements, and legislative frameworks are the most visible sources of coercive pressure.

Mimetic isomorphism, according to DiMaggio and Powell, emerges under conditions of uncertainty. When organisations confront volatile environments, opaque technologies, or ambiguous objectives, they often seek orientation by emulating institutions perceived to be successful. This process is not necessarily deliberate or cynical; rather, it reflects a pragmatic

response to the anxiety of ambiguity. Imitation mitigates the risks and costs of innovation by adopting templates that have already secured legitimacy. In the sphere of higher education, the widespread tendency to frame institutional aspirations around the model of the "world-class university", defined predominantly by Anglo-American research institutions, offers a well-documented illustration of mimetic pressures at work.

Normative isomorphism derives from processes of professionalisation signalling the ways in which occupational groups establish shared standards, qualifications, and conceptions of legitimate practice. As professionals are trained in similar institutions, participate in the same associations, engage with the same scholarly journals, and circulate across organisations, they carry with them convergent assumptions about what constitutes sound research, appropriate governance, or credible academic work. In higher education, the near-universal requirement of the PhD for academic appointments, or the widespread reliance on the National Research Foundation (NRF) rating system as a benchmark of scholarly worth, exemplify how normative mechanisms generate convergence even among institutions with formally distinct missions.

What makes DiMaggio and Powell's framework especially valuable for the present analysis is its explicit recognition that isomorphic processes do not necessarily make organisations *better*. They reward organisations for *resembling* one another and for *appearing* to conform to recognised templates, not for performing their core functions more effectively. This creates what Meyer and Rowan (1977) famously described as *decoupling*: a structural gap between an organisation's formal policies, which are designed to satisfy external audiences, and its actual practices, which may be quite different. Institutions erect structures that signal conformity without those structures genuinely changing what happens inside them. South African universities exhibiting all the hallmarks of good governance whilst continuing to experience deep operational dysfunction are a textbook illustration of this dynamic. As Scott (2001, p. 22) clarifies, organisations endure "to the extent that they are accepted as legitimate, that is, as resting on a sound normative foundation or reflecting a proper and adequate response to environmental demands." The burden of that legitimacy performance, however, falls hardest on those who depend on universities for substantive educational outcomes.

One qualification must be registered before proceeding. Neo-institutional theory does not depict organisations as passive objects simply absorbing external pressure without internal response. As Seo and Creed (2002) demonstrate, institutions are internally contradictory and contested: competing logics coexist within them, generating conditions for both continuity and change. South African universities are not homogeneous entities; they are sites of conflicting values, unequal resources, and sharply differentiated histories. The argument advanced in this article does not dissolve that internal complexity. Rather, it seeks to illuminate the structural

forces: coercive, mimetic, and normative, that compel even diverse institutions toward similarly dysfunctional responses within their shared organisational field.

ARTIFICIAL INTELLIGENCE AS ISOMORPHIC ACCELERANT: THE ALGORITHMIC IRON CAGE

The preceding analysis has established the structural conditions that generate convergent dysfunction in South African higher education under conventional isomorphic pressures. This section extends that framework by building on Cheng's "algorithmic iron cage" (2025), a second-order enclosure within Weber's original, whose bars are not written in regulatory text or professional norms, but in the architecture of the systems universities use to manage their core functions. Artificial intelligence, and specifically, the generative AI wave triggered by the public release of large language models (LLMs) from late 2022 onwards, constitutes a qualitatively new and uniquely powerful isomorphic force in the organisational field of higher education. AI is not simply another technology that universities adopt or resist. It operates across all three isomorphic mechanisms simultaneously, intensifying each; it embeds isomorphic logics into technical infrastructure in ways that render them invisible and increasingly resistant to deliberate intervention; and, in the Global South context of South African higher education, it carries the additional weight of epistemic hierarchy, transmitting the values, assumptions, and knowledge bases of Anglo-American AI developers into the technical foundations of institutions ostensibly committed to decolonisation.

Coercive AI isomorphism: Regulating the algorithmic institution

The coercive dimension of AI-driven isomorphism manifests through two interrelated channels: the direct regulatory pressures emerging from global and national AI governance frameworks, and the indirect coercive pressures embedded in AI-mediated audit and compliance systems that universities have already adopted and cannot easily abandon. On the regulatory front, the rapid proliferation of AI policy instruments is exerting demands that penetrate deeply into university governance structures. The European Union's Artificial Intelligence Act (2024), for example, designates educational applications of AI as "high risk," thereby mandating transparency, human oversight, and accountability measures. Institutions operating within, or credentialing students for, European educational markets are thus compelled to adopt standardised AI governance arrangements. Similarly, UNESCO's (2023) suite of AI education frameworks, including the Beijing Consensus on AI and Education and the AI Competence Framework co-developed with IBM, generates normative pressures that

function coercively for institutions seeking UNESCO endorsement or wishing to participate in UNESCO-affiliated networks.

In South Africa, the national AI policy environment is rapidly consolidating (Fataar, 2026). The government's AI policy framework, together with parallel regulatory initiatives from the Information Regulator under the Protection of Personal Information Act (POPIA), is imposing compliance obligations around data governance, algorithmic transparency, and disclosure of AI use, requirements that institutions must meet irrespective of their technical capacity or pedagogical readiness. In this respect, AI regulation reproduces the isomorphic logic of the National Qualifications Framework (NQF): it establishes uniform compliance demands across a differentiated institutional landscape, compelling universities to generate similar artefacts, regardless of their contextual appropriateness to specific missions, student populations, or resource environments. The institutional response to these coercive pressures is evident in South African policy texts. North-West University's *Policy on Artificial Intelligence* (approved November 2025) situates AI governance explicitly within constitutional and Department of Higher Education and Training (DHET) legislative frameworks, foregrounding risk management and regulatory alignment over pedagogical innovation. This constitutes a paradigmatic instance of coercive isomorphism: external normative architectures dictate institutional compliance, even when such alignment is only tenuously connected to the university's distinctive mission or contextual fit.

The coercive pressures exerted by AI-mediated audit systems constitute an equally significant, though less visible, isomorphic force. Platforms designed to safeguard academic integrity, such as Turnitin's AI detection tools, have been widely adopted by South African universities in response to the perceived crisis of AI-assisted misconduct. The Council on Higher Education's (CHE, 2016) audit documentation confirms the sector-wide proliferation of compliance-oriented integrity infrastructures, while Selwyn (2022) demonstrates that EdTech adoption in comparable contexts is systematically driven by audit imperatives rather than pedagogical deliberation. In South Africa, the Higher Education Quality Committee's accreditation cycle, which requires documented evidence of integrity policies and procedures, creates a structural incentive for precisely this form of tool adoption (Lues and Lategan, 2006). In practice, such adoption is coerced: the alternative, appearing to tolerate academic dishonesty, is institutionally untenable within an audit-driven environment. Yet by embracing these tools, universities simultaneously internalise the normative frameworks embedded in their design: a particular conception of academic integrity, a specific model of legitimate student writing, and a set of assumptions about the boundary between human and machine contribution. Crucially, these assumptions do not emerge from locally negotiated pedagogical judgements, but from

the commercial logic of a Global North EdTech company. The cage, in effect, is imported intact, without interrogation of its architecture.

Mimetic AI isomorphism: The race to the AI-ready university

If mimetic isomorphism is most powerfully activated under conditions of uncertainty, then generative AI constitutes its ideal catalyst. The release of ChatGPT in November 2022 generated unprecedented institutional uncertainty at extraordinary speed: university leaders lacking technical expertise in large language models, empirical evidence of pedagogical impacts, or established governance frameworks were compelled to respond visibly and publicly to a technology that had instantly become the focus of global media discourse. Institutional reactions unfolded precisely as institutional theory would predict: rapid, convergent mimicry. An, Sun, Chen (2025) An, K., Y. Sun, and J. Chen. (2025) note that within months, 94 percent of the top 50 US universities had issued faculty-facing generative AI guidelines at a rate of policy convergence that, under normal conditions, would have taken years or even decades. What is theoretically significant, however, is not the velocity of these responses but their uniformity: institutions with profoundly different missions, student demographics, and resource endowments produced structurally similar policy documents, reflecting shared mimetic templates rather than contextually differentiated analyses.

South African universities too followed this trajectory with only modest delay. Confronted by the same uncertainty and drawing upon the same global templates, institutions ranging from MIT and Stanford provided models that local universities adapted into AI policies reflecting mimetic patterns more than contextual realities. The consequences of this mimetic rush reproduce, in concentrated form, the dynamics previously identified in relation to the world-class university aspiration: policy adoption pursued for legitimacy rather than contextual fitness. Kim et al (2025) report that students at institutions with AI policies remain uncertain about permissible practices, while faculty members describe inadequate training to implement the very policies they are tasked with enforcing, a pattern that, in Meyer and Rowan's (1977) terms, exemplifies decoupling in its purest form. The policy functions as a legitimacy signal; the classroom, however, reveals a different institutional reality altogether.

The South African policy record substantiates this mimetic pattern. The University of KwaZulu-Natal's Principles and Guidelines on the Use of Generative AI Tools in Academic Work (effective January 2025) and Wits University's AI Framework (2023–2029) share broadly similar governance logics: an emphasis on ethical use, academic integrity, and phased implementation, despite these institutions' markedly different missions, student profiles, and resource endowments. That two institutions with such distinct histories and mandates would

produce structurally convergent policy instruments is what DiMaggio and Powell's theory of mimetic isomorphism predicts: under conditions of uncertainty about what responsible AI governance looks like, institutions converge on a shared template rather than developing contextually differentiated responses.

The mimetic logic of AI adoption in higher education has a longer genealogy than the recent generative AI moment. Noble's (1998) perceptive analysis of the "digital diploma mills" phenomenon identified, in the first wave of online learning commercialisation, precisely the pattern that is now repeating at higher velocity: universities adopting digital technologies less for their educational value than for what they signalled about institutional modernity, entering agreements with commercial technology providers whose interests were commercial rather than pedagogical. The structural analogy holds with near-perfect fidelity in the current moment. Universities forming institutional partnerships with Microsoft Copilot for Education, adopting Google's Gemini-integrated workspace, or purchasing enterprise-level ChatGPT licences are engaging in mimetic isomorphism: they are adopting the form of AI-enabled institutions, generating the legitimacy signal of technological currency, without having conducted the evidence-based analysis of whether and how these tools serve their students' genuine educational needs. The world-class university has been rebranded, with minimal structural modification, as the AI-ready university.

Normative AI isomorphism: New professionals, new orthodoxies

The normative dimension of AI isomorphism in higher education is perhaps the most consequential for the long term, because it operates at the level of professional identity, the deepest substrate of institutional behaviour. The emergence of a new professional class organised around AI in education is generating normative convergence through precisely the mechanisms DiMaggio and Powell identify: the universalisation of new credential requirements, the establishment of professional associations and networks, and the inter-institutional mobility of individuals carrying new normative frameworks across organisations.

The "Chief AI Officer" (CAIO) role, particularly in USA context, although not yet universalised, is emerging as a standard executive appointment in universities, institutionalising AI governance as an organisational function with a defined professional identity and associated normative expectations. As this role circulates through LinkedIn networks, higher education conferences, and the executive search firms that increasingly define the talent pool for senior institutional appointments, it carries with it a relatively standardised conception of what responsible AI governance looks like, drawn predominantly from corporate digital transformation frameworks rather than from the scholarship of teaching and learning or

higher education institutional theory. The normative template for the CAIO role is the technology industry, not the academy. Selwyn's (2022) critical analysis of educational technology's governance by commercial interest is apposite here: the entry of Big Tech into the definitional work of what legitimate AI practice in education looks like constitutes normative isomorphism exerted from outside the academic profession, by actors whose primary accountability is to shareholders rather than students.

UNESCO's AI Competence Framework for educators (UNESCO IESALC and IBM 2024), the OECD's guidance on AI in education (2021), and the proliferating literature on AI literacy as a graduate attribute are generating a new professional vocabulary including "prompt engineering," "AI ethics," "algorithmic literacy", becoming the currency of legitimate academic practice. Institutions establishing AI literacy as a graduation requirement, academics publishing on AI pedagogy, and professional development providers certifying "AI-ready educators" are all participating in a normative convergence that is globally transmitted and locally adopted with minimal contextual adaptation (George and Wooden 2023). The academic conference circuit and journal publication system, effectively the same mechanisms that transmitted research-intensive norms across the South African university sector, are now transmitting AI normative frameworks with comparable speed and comparable insensitivity to contextual differentiation.

The algorithmic iron cage: Decoupling hardened in code

The theoretical contribution that the AI dimension adds to the isomorphism analysis is not simply quantitative, inspiring more isomorphic pressure, through more channels, at greater speed, but qualitative. AI transforms the nature of isomorphic constraint by migrating isomorphic logics from the social and normative register to the technical register, embedding them in the algorithmic systems through which universities manage their core institutional functions. Consider the specific mechanisms through which this migration occurs. When a university adopts a commercial AI-driven admissions screening tool, it embeds within its core student selection process, a model trained on historical data that reflects existing patterns of advantage and disadvantage, reinforcing patterns that are, in the South African context, deeply racialised and class-stratified. The isomorphic logic of the system is invisible to the admissions officer who accepts its recommendations: it does not present itself as a normative framework imported from a different institutional context, but as an efficient technical solution to an administrative problem. When a university deploys an AI-driven research metrics platform to support performance management, it encodes within its evaluation of academic worth, the priorities of the global citation index, the normative hierarchy of the research-intensive

university world, in a technical form that is experienced by academic staff not as an institutional choice, but as an objective measurement. These are not hypothetical scenarios: they are the current direction of travel in higher education AI adoption globally, and this trajectory is becoming apparent in South Africa.

The decoupling that Meyer and Rowan (1977) identified as a structural feature of institutionalised organisations takes a new and more insidious form in the context of algorithmic systems. Conventional decoupling involves a gap between an organisation's formal policies and its actual practices, a gap that, in principle, can be identified, analysed, and closed through deliberate institutional intervention. Algorithmic decoupling involves a gap between an organisation's stated educational values and the values embedded in the technical systems it depends upon. This gap that is substantially more difficult to identify because the technical systems are opaque, proprietary, and managed by commercial actors with no accountability to the institution's educational mission. Selwyn (2022) captures this dynamic in his analysis of what he calls "socially stupid systems": AI that is technically sophisticated but socially unintelligent, unable to account for the contextual layers of complexity implicit in any educational situation, and thereby producing outcomes that are systematically biased toward those for whom the training data was generated.

In the South African context, the algorithmic decoupling problem carries a specifically postcolonial dimension that warrants explicit theorisation. The large language models that South African universities are adopting, whether through Microsoft, Google, Anthropic, or OpenAI integrations, are trained overwhelmingly on data generated in the Global North, in English, and within epistemological traditions that reflect the heritage of European knowledge production. When these models are used to support student writing development, generate assessment feedback, power academic advising chatbots, or inform curriculum design, they transmit, silently and at scale, the normative assumptions of Anglo-American academic culture. The decolonial agenda to which South African universities are ostensibly committed: the project of recognising and legitimising epistemologies of the South, of creating genuinely pluralistic knowledge environments, is directly contradicted by the wholesale adoption of AI tools that embody its antithesis in technical form. This is what this article terms "colonial isomorphism 2.0": the reproduction, through algorithmic means, of the epistemic hierarchies that post-apartheid higher education policy has nominally sought to dismantle. The cage is familiar; only the material from which its bars are forged is new.

DISCUSSION: THE LEGITIMACY-PERFORMANCE PARADOX, DEEPENED

The three mechanisms analysed above converge on a single theoretical conclusion: South African universities are subject to multi-layered isomorphic pressures that drive organisational convergence toward forms whose primary fitness lies in institutional legitimacy rather than pedagogic performance. The AI dimension intensifies this dynamic by demonstrating that isomorphic pressures are not only escalating in intensity through three channels simultaneously amplified by AI, but are also undergoing a structural transformation, becoming technically instantiated rather than merely socially exerted. The legitimacy–performance paradox identified by Meyer and Rowan (1977) as a structural feature of institutionalised organisations thus acquires a new complexity under conditions of algorithmic isomorphism: it becomes progressively more difficult to detect and resolve through deliberate institutional agency, precisely because the mechanisms producing it are embedded within the technical systems that constitute the institution's operating infrastructure.

The concept of decoupling is useful for understanding the South African higher education situation, and AI intensifies its significance. Transformation policies are enacted at the level of institutional narrative, while undergraduate curricula remain substantially unchanged. Academic development units are established, while academic promotion criteria continue to marginalise teaching scholarship. Quality assurance systems generate voluminous documentation, while the quality of student educational experience remains uneven. Strategic plans articulate ambitious visions of community engagement while performance management systems reward behaviours associated with research-intensive universities. To this familiar catalogue, the AI era adds: AI ethics frameworks are published while AI procurement decisions are made by IT departments without pedagogical oversight; AI literacy is declared a graduate attribute, while AI tools are adopted that produce content in the epistemological register of Anglo-American academic culture; AI governance committees are established, while commercial AI platforms embed their normative assumptions in the institution's technical infrastructure before the governance committee has met.

The concept of institutional logics extends the isomorphic analysis further. South African universities are sites in which multiple, partially incompatible institutional logics compete: the logic of the academic profession, the logic of the managerial state, the logic of market competition, and the logic of social transformation. AI does not resolve any of these competing logics; it provides each with new instruments and new legitimacy claims. The managerial state logic deploys AI for surveillance and accountability: student engagement tracking, AI-assisted proctoring, algorithmic performance management. The market competition logic deploys AI for reputation and differentiation: AI-enhanced research outputs, AI-optimised recruitment

communications, rankings-legible AI innovation metrics. The academic profession logic deploys AI for productivity: AI-assisted literature reviews, AI-augmented writing, AI-powered peer review. Only the social transformation logic lacks an obvious AI instrument, and this asymmetry is neither accidental nor politically neutral. It reflects the structural bias of AI systems toward the organisations, communities, and epistemological traditions whose data generated them.

The implications for university leadership are both sobering and clarifying. Institutional entrepreneurship, the capacity of actors with sufficient resources and positional authority to establish new institutions or transform existing ones (DiMaggio 1988), remains theoretically available as a response to isomorphic pressures. Yet, in the era of artificial intelligence, it demands two qualities that are seldom cultivated within prevailing governance cultures: technical literacy regarding the systems being adopted, and institutional courage to resist commercially attractive but educationally questionable decisions. The counter-isomorphic potential of AI: its capacity, when deliberately deployed, to foster genuinely differentiated, contextually responsive, and epistemologically pluralistic educational experiences, is real but contingent. Realisation of this potential requires institutions to resist the mimetic allure of AI-as-spectacle, the coercive pressure of AI compliance as audit artefact, and the normative influence of governance frameworks designed for contexts markedly different from South African universities. In short, it calls for the same deliberate differentiation that pre-AI analyses identified as essential for heteromorphic institutional futures, but with the added complexity that contemporary isomorphic forces now include technical systems whose architectures remain opaque to most institutional actors.

BREAKING OUT OF THE IRON CAGE

Thus far, I have sketched what may be perceived as a dystopian trajectory for higher education, one marked by diminished agency, curtailed possibility, and an almost deterministic inevitability. Is all lost? Perhaps not. We will now shift the gaze to the three South African universities that are attempting to respond proactively to the AI challenge. Yet to leave the analysis at the level of tension is to understate what these three cases collectively demonstrate. Each institution, in its own way, enacts a form of deliberate institutional reflexivity, a self-conscious effort to interrogate and resist the logics that would otherwise quietly absorb it. This is precisely what escape from the iron cage looks like in practice: not rupture, not revolution, but the disciplined insistence, at the point of policy formation, that convergence is a choice rather than an inevitability.

North-West University's decision to anchor its AI governance explicitly within South Africa's constitutional and higher education legislative frameworks is theoretically consequential beyond its procedural surface. Rather than adopting AI policy instruments modelled on Global North regulatory templates (the EU AI Act, the UNESCO guidance documents, or the vendor-authored "responsible AI" frameworks that circulate freely as mimetic resources), NWU inverts the logic of coercive isomorphism. It uses legal sovereignty as a counter-isomorphic force: the state's own normative architecture becomes the instrument through which market- and technology-driven convergence is filtered, constrained, and subjected to institutional deliberation. This is not mere compliance with external expectations but an act of what Seo and Creed (2002) would recognise as praxis, the deployment of institutional contradictions as levers for transformation. By positioning constitutional imperatives as the primary framework for AI governance, NWU asserts that legitimacy in the South African context must be earned within a specifically post-apartheid normative order, one that cannot be satisfied by technological sophistication alone.

The University of KwaZulu-Natal's approach performs a different but equally significant counter-isomorphic move. By placing ethical and pedagogical considerations at the forefront of its generative AI guidelines, and doing so from their effective date of January 2025, before external accreditation pressures or ministerial directives required it, UKZN exercises a form of normative self-determination. The prioritisation of pedagogy over technical efficiency reverses the default logic of mimetic isomorphism, in which institutions typically adopt AI tools first and negotiate their educational implications afterwards, if at all. In DiMaggio and Powell's (1983) terms, mimetic isomorphism thrives on uncertainty: when outcomes are ambiguous, organisations copy those they deem successful. UKZN's guidelines refuse this logic by asserting that pedagogical relationship, rather than measurable output, constitutes the relevant standard of success. This shifts the burden of proof: rather than AI tools having to demonstrate pedagogical harm before institutional caution is warranted, the guidelines establish pedagogical fitness as the prior condition of adoption. This inversion is not merely procedural; it reconstitutes the normative field within which AI legitimacy is assessed, and in doing so, narrows the space within which uncritical mimicry can operate.

Wits University's AI Framework (2023–2029) represents perhaps the most explicit act of cage-breaking among the three. Its central commitment, to resist defining institutional identity through AI, names what isomorphic analysis identifies as the deepest risk: the displacement of a university's constitutive values by the values embedded in algorithmic infrastructure. DiMaggio's (1988) account of interest and agency in institutional theory reminds us that fields are not merely reproduced; they are also contested by actors with sufficient resources and

reflexivity to resist the gravitational pull of convergence. Wits' Framework enacts precisely this contestation. By insisting that integrity and contextual values, rather than technological affordances, define the institution's strategic trajectory, it performs what might be termed normative self-authorship, with the institution refusing to be authored by the AI market. This is not technophobia; the Framework is a seven-year strategic document, not a prohibition. It is, rather, an epistemological and institutional wager: that a university's identity must precede and govern its technology choices, not be reconstructed around them.

Read in aggregate, these three cases expose the iron cage for what Weber and DiMaggio and Powell both, ultimately, understood it to be: not a permanent condition but a structurally reproduced tendency, one that is reproduced only insofar as actors within the field refrain from exercising the agency available to them. The cage holds because institutions choose, often unreflectively, to replicate the forms that confer legitimacy within their organisational field. The moment institutions choose otherwise, grounding their AI governance in constitutional frameworks, asserting pedagogical primacy, refusing to cede identity to algorithmic definition, they begin to demonstrate that the bars are constructed, not given. They do not escape the field; no institution does. But they act from within it in ways that alter its normative architecture, creating conditions under which heteromorphic differentiation becomes not merely desirable but demonstrably achievable. The iron cage, in this reading, is not dismantled in a single act of institutional courage. It is corroded, gradually and collectively, by precisely the kind of principled institutional reflexivity that NWU, UKZN, Wits and others not named in this article, imperfectly, partially, but meaningfully, exhibit.

Within this context, the National Framework for the Enhancement of University Teachers (NfEAUT)[2], implemented through the South African University Teachers (SAUT) programme, emerges as a potentially significant counter-isomorphic intervention, its importance further magnified by the integration of artificial intelligence. Crucially, the NfEAUT establishes a normative standard for teaching excellence that resists reduction to AI-driven productivity metrics or global research rankings. Instead, it deliberately foregrounds pedagogical sophistication, innovation, scholarly engagement with teaching practice, and contributions to student learning, qualities that, by their very nature, elude algorithmic evaluation.

Parallel initiatives such as the Teaching Advancement at Universities (TAU) Fellowship Programme and the National University Teaching Awards (NUTA) similarly contest the isomorphic conflation of academic excellence with outputs legible to AI-powered metrics

[2] South African University Teachers (SAUT) https://sauniversityteachers.org.za/

platforms. Whether these normative interventions can ultimately constitute a sufficient counterweight to the algorithmic iron cage remains an open empirical question. What is theoretically clear, however, is that such interventions, operating at the normative level and defending spaces of human judgment against algorithmic substitution, represent some of the most vital strategies available to a higher education system committed to genuine heteromorphic differentiation.

CONCLUDING OBSERVATIONS: TOWARD HETEROMORPHIC FUTURES IN THE AGE OF AI

The analysis advanced in this article demonstrates that the recurrent dysfunctions within South African higher education are not accidental aberrations but the predictable outcomes of structural forces. These forces manifest through coercive, mimetic, and normative isomorphic mechanisms that compel institutions toward equivalence. Artificial intelligence does not merely intensify these dynamics; it reconfigures them at a fundamental level.

Where Weber's metaphor of the *iron cage* signified the confinement of human agency within bureaucratic rationality, and DiMaggio and Powell revealed how organisational fields reproduce themselves through the relentless pursuit of legitimacy, the contemporary epoch of artificial intelligence inaugurates a qualitatively more formidable enclosure: the *algorithmic iron cage*. Its bars are etched in code, its logic remains largely inscrutable to institutional actors, and its architecture constrains precisely those deliberative practices upon which the possibility of substantive reform depends.

The theoretical contribution of this analysis unfolds along two interrelated and mutually reinforcing dimensions. The first concerns the legitimacy–performance paradox at the heart of South African higher education: institutions that secure legitimacy through isomorphic conformity by adopting organisational forms, procedural templates, and discursive repertoires calibrated to the expectations of the state, professional bodies, and markets, are precisely those most vulnerable to decoupling. Compliance becomes performance and recognition, a token of substantive function. The formal architecture of legitimacy progressively dislocates from the imperatives of educating students and producing contextually relevant knowledge.

The second dimension demonstrates how artificial intelligence does not merely intensify this paradox, but transforms and obscures it. AI equips institutional logics with increasingly sophisticated instruments of legitimacy-signalling while simultaneously rendering the disjunction between policy and practice more opaque and resistant to correction. Dysfunction is not simply reproduced; it is technologically mediated into invisibility. In this process,

legitimacy becomes a condition that both conceals institutional fragility and forecloses the very avenues through which fragility might be addressed.

The policy implications that emerge are demanding, yet not beyond reach, provided there is the collective will to act with the theoretical depth the moment requires. A genuinely differentiated higher education system necessitates deliberate and sustained counterpressure, not only against the familiar forms of isomorphism but also against their AI-intensified variants. This entails procurement frameworks reoriented toward demonstrable pedagogical value rather than the allure of technical prestige or vendor reputation. It requires governance structures that meaningfully incorporate academic staff, students, and community stakeholders, thereby wresting critical decisions from the exclusive domain of IT departments and commercial partners. It calls for sustained investment in locally trained AI models capable of embodying the epistemological diversity of South African knowledge traditions, rather than subordinating them to the homogenising assumptions embedded in Global North large language models.

Most crucially, the moment demands explicit institutional policies that designate domains of academic judgment, pedagogical relationship, and scholarly practice as irreducibly human and protected from algorithmic substitution; not because artificial intelligence lacks technical competence, but because their educational value is constitutively human. Such measures are not ancillary. Taken together, they comprise the architecture of an active and theoretically coherent resistance to AI-driven isomorphism.

The claims advanced here, while grounded in international trends and shaped by critical reflexivity, remain necessarily generative rather than definitive. The theoretical framework developed across this article, tracing the migration of isomorphic logics from social and normative registers into algorithmic infrastructures, functions as a diagnostic scaffold rather than a settled account. It identifies the mechanisms and trajectories of AI-driven convergence, but it does not yet measure their institutional depth, their distributional variation, or the precise conditions under which counter-isomorphic agency might become viable. That task is empirical, and it is urgent. A systematic research agenda is therefore needed, one that subjects South African universities to the same critical rigour brought to bear on their theoretical conditions of possibility. Several priority lines of inquiry present themselves.

First, comparative institutional case studies across a purposively selected range of universities: historically advantaged and historically disadvantaged, urban and rural, research-intensive and teaching-focused. This range would allow the coercive, mimetic, and normative dimensions of AI-driven isomorphism to be traced not as abstract tendencies but as lived institutional processes. The research instruments are already available: AI policy documents,

strategic plans, council minutes, procurement records, and staff development frameworks constitute a rich documentary archive that, read against one another and against the theoretical framework elaborated here, would yield both confirmation and complication of the argument (Maluleke 2025).

Second, AI procurement decisions deserve analytical attention, and receive almost none in the existing literature. The question of which AI platforms South African universities are contracting with, on what terms, with what data-governance provisions, and with what pedagogical justification, is a question about isomorphic pressure in its most material form. (Mogoale, et al 2025). Procurement is where the algorithmic iron cage is assembled; it is also where institutional agency, or its absence, is most concretely disclosed. A sector-wide audit of AI procurement, examining not only the platforms selected but the processes by which they were selected and the actors who controlled those processes, would constitute a significant advance on the largely policy-level analysis currently available

Third, and perhaps most consequentially, the lived experience of academic staff and students under conditions of algorithmic isomorphism requires direct investigation. Survey and interview data capturing faculty perceptions of AI governance legitimacy, student assessments of AI tool fitness to their learning contexts, and academic developers' accounts of the tensions between AI adoption and pedagogical mission would ground the structural argument of this article in the institutional realities it purports to describe. Without this, the analysis risks the very decoupling it diagnoses, a theoretically sophisticated account of isomorphism that remains formally detached from the organisational life it claims to illuminate (Patel and Ragolane 2024).

The framework articulated here is extended as an invitation to researchers willing to carry its logic into the field, to institutional leaders prepared to subject their AI decisions to the scrutiny it demands, and to policymakers ready to ask whether the convergence now visibly underway in South African higher education is the convergence the sector truly requires. What is not in doubt is the sobering reality this analysis discloses: unless the isomorphic mechanisms of convergence, now intensified, accelerated, and concealed by AI, are consciously and persistently resisted, South African universities will continue to reproduce, at considerable institutional cost, the very dysfunctions that have long defined the sector. The cage is real. Its bars are structural, and in the age of AI, some are written in code. Dismantling it demands more than aspirational rhetoric or technocratic adjustment. It requires theoretically informed institutional leadership, equipped with the technical literacy to interrogate adopted architectures and the epistemological courage to insist, against the grain of global convergence, that heteromorphic futures cannot be assembled from templates designed elsewhere.

REFERENCES

An, K., Y. Sun, and J. Chen. 2025. "Investigating the Higher Education Institutions' Guidelines and Policies Regarding the Use of Generative AI in Teaching, Learning, and Assessment." *International Journal of Educational Technology in Higher Education* 22 (10): 1–23. https://doi.org/10.1186/s41239-024-00501-w.

Cheng, Jingyu. 2025. "Digital Alienation and the Algorithmic Iron Cage: A Marxist Political Economy Deconstruction of the Exploitative Logic in Platform Capitalism." *Advances in Philosophy* 14 (5): 376–388. https://doi.org/10.12677/acpp.2025.145258.

Council on Higher Education (CHE). 2016. *South African Higher Education Reviewed: Two Decades of Democracy*. Pretoria: CHE.

Dhunpath, Rubby. 2026. "Traversing Paradoxes: An Autoethnographic Inquiry into Systemic Dysfunction in South African Higher Education." *Culture and Organization*. Under review.

DiMaggio, Paul J. 1988. "Interest and Agency in Institutional Theory." In *Institutional Patterns and Organizations: Culture and Environment*, edited by Lynne G. Zucker, 3–22. Cambridge, MA: Ballinger.

DiMaggio, Paul J., and Walter W. Powell. 1983. "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." *American Sociological Review* 48 (2): 147–160. https://doi.org/10.2307/2095101.

European Union. 2024. *Regulation on Artificial Intelligence (AI Act)*. *Official Journal of the European Union*. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32024R1689.

Fataar, Aslam. 2026. "Pedagogies in the Age of AI: How to Secure Credible Learning." *University World News*, February 19, 2026. https://www.universityworldnews.com/post.php?story=20260216035553484.

George, Babu, and Olive Wooden. 2023. "Managing the Strategic Transformation of Higher Education through Artificial Intelligence." *Administrative Sciences* 13 (9): 196. https://doi.org/10.3390/admsci13090196.

Habib, Adam. 2019. *Rebels and Rage: Reflecting on #FeesMustFall*. Johannesburg: Jonathan Ball.

Jansen, Jonathan D. 2023. *Corrupted: A Study of Chronic Dysfunction in South African Universities*. Johannesburg: Wits University Press.

Kim, Junghwan, Michelle Klopfer, Jacob R. Grohs, Hoda Eldardiry, James Weichert, Larry A. Cox II, and Dale Pike. 2025. "Examining Faculty and Student Perceptions of Generative AI in University Courses." *Innovative Higher Education* 50 (4): 1281–1313. https://doi.org/10.1007/s10755-024-09774-w.

Lues, Liezel, and Louis O. K. Lategan. 2006. *RE:search—Finding Your Way in Academic Research*. Stellenbosch: SUN PReSS.

Maluleke, A. F. 2025. "AI Adoption in African Higher Education: A Systematic Review of Benefits and Ethical Implications." *Interdisciplinary Journal of Education Research* 7 (2). https://doi.org/10.38140/ijer-2025.vol7.2.05.

Meyer, John W., and Brian Rowan. 1977. "Institutionalized Organizations: Formal Structure as Myth and Ceremony." *American Journal of Sociology* 83 (2): 340–363. https://doi.org/10.1086/226550.

Mogoale, P. D., A. Pretorius, R. C. Mogase, and M. A. Segooa. 2025. "Integrating Artificial Intelligence within South African Higher Learning Institutions." *South African Journal of Information Management* 27 (1): a1939. https://doi.org/10.4102/sajim.v27i1.1939.

Noble, David F. 1998. "Digital Diploma Mills: The Automation of Higher Education." *First Monday* 3 (1). https://doi.org/10.5210/fm.v3i1.569.

North-West University. 2025. *Policy on Artificial Intelligence (AI)*. Potchefstroom: North-West University. Approved November 2025. https://www.nwu.ac.za.

Organisation for Economic Co-operation and Development (OECD). 2021. *AI and Education: Guidance for Policy-Makers*. Paris: OECD Publishing. https://doi.org/10.1787/bed020a2-en.

Patel, Y., and M. Ragolane. 2024. "Artificial Intelligence in South African Higher Education: Opportunities, Challenges, and Ethical Considerations." *Regent Business School Working Paper Series*. Durban: Regent Business School.

Scott, James C. 1990. *Domination and the Arts of Resistance: Hidden Transcripts*. New Haven: Yale University Press.

Scott, W. Richard. 2001. *Institutions and Organizations*. 2nd ed. Thousand Oaks, CA: Sage.

.Selwyn, Neil. 2022. "The Future of AI and Education: Some Cautionary Notes." *European Journal of Education* 57 (4): 620–631. https://doi.org/10.1111/ejed.12532.

Seo, Myeong-Gu, and W. E. Douglas Creed. 2002. "Institutional Contradictions, Praxis, and Institutional Change: A Dialectical Perspective." *Academy of Management Review* 27 (2): 222–247. https://doi.org/10.2307/4134353.

University of KwaZulu-Natal. 2025. *Principles and Guidelines on the Use of Generative AI Tools in Academic Work*. Durban: University of KwaZulu-Natal. Effective January 2025. https://ukzn.ac.za.

University of the Witwatersrand. 2023. *AI Framework (2023–2029)*. Johannesburg: University of the Witwatersrand. https://www.wits.ac.za.

UNESCO. 2019. *Beijing Consensus on Artificial Intelligence and Education*. Paris: UNESCO.

UNESCO. 2023. *Guidance for Generative AI in Education and Research*. Paris: UNESCO Publishing.

UNESCO IESALC and IBM. 2024. *AI Competence Framework for T.*

Zucker, Lynne G. 1977. "The Role of Institutionalization in Cultural Persistence." *American Sociological Review* 42 (5): 726–743. https://doi.org/10.2307/2094862.