

# Artificial Intelligence, Agentic Systems, and the Crisis of Measure: Reimagining Humanities and Liberal Education Under NEP-2020

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**Abstract:** *The restructuring of undergraduate education under the National Education Policy (NEP) 2020 is largely framed as a response to emerging technologies and evolving labour market demands. This paper argues that the rise of Artificial Intelligence (AI) represents a deeper epistemic disruption, particularly within the humanities. Unlike earlier technological transformations, which primarily influenced pedagogy and access, AI intervenes in the processes of knowledge production, interpretation, and application. The transformation of AI from a tool into an active agent- capable of dynamically responding to context in an object-oriented manner- constitutes a tectonic shift in knowledge systems. The emergence of agentic AI systems further intensifies this disruption by enabling autonomous decision-making and the contextual execution of knowledge, thereby displacing human cognitive centrality. The paper conceptualizes this transformation as a “crisis of measure,” wherein the criteria for validating knowledge themselves become unstable. Drawing on both classical epistemology and recent AI scholarship, it argues for a reconstitution of the humanities and liberal education as central to preserving human agency, ethical responsibility, and epistemic awareness. The paper concludes by proposing a reorientation of undergraduate education toward reconstructing the foundations of knowledge in an increasingly autonomous technological environment.*

**Keywords:** Artificial Intelligence; Epistemology; Humanities; Liberal Education; NEP 2020; Knowledge Systems; Agency; Higher Education Reform

## 1. Introduction

The implementation of the National Education Policy (NEP) 2020 has initiated a significant restructuring of undergraduate education in India, emphasizing interdisciplinary approach, flexibility, and skill orientation. Much of this restructuring is justified in terms of aligning education with emerging technologies and changing job roles. However, such a framing remains largely instrumental. It focuses on employability and skill acquisition while overlooking a more fundamental transformation

Unlike earlier technological advancements, which influenced the content, pedagogy, and dissemination of knowledge, AI intervenes in the production, validation, and application of knowledge itself. This transformation is particularly significant for the humanities, where interpretation, meaning-making, and critical reasoning constitute the epistemic core. This paper argues that the current moment represents not merely a technological shift, but a reconfiguration of the foundations of knowledge systems, necessitating a rethinking of the role of humanities and liberal education.

**Humanities: Definition, Scope, and Epistemic Orientation:** The humanities comprise disciplines concerned with understanding, interpreting, and evaluating human experience, values, and cultural expressions across historical and social contexts. These include philosophy, history, literature, political science, sociology, anthropology, and related fields. Their epistemic orientation differs from that of the natural sciences. While the sciences aim at causal explanation and prediction, the humanities engage in interpretation, normative evaluation, and critical reflection.

Accordingly, they address questions that cannot be resolved through empirical verification alone- questions of ethics, justice, meaning, and human purpose (Nussbaum, 2010). Within this spectrum, economics occupies a distinctive position. Although it has become increasingly formalized and quantitative, its foundational concerns- welfare, rationality, and distribution- remain deeply embedded in normative and philosophical inquiry. It thus functions as a bridge discipline, linking material analysis with broader human concerns.

In contrast, other social sciences and arts disciplines may appear to lack empiricism; however, this is not due to an avoidance of empirical methods, but rather arises from their epistemic orientation, which prioritizes interpretation, context, and meaning over measurement and prediction. The continuity of these disciplines in their traditional form, sustained over long historical trajectories, now appears to be under pressure from emerging technological transformations that are reshaping the processes of knowledge creation and dissemination. Whether this situation warrants a redefinition of their scope and epistemic orientation remains a critical question that demands systematic inquiry.

**Liberal Education as the Intellectual Foundation:** Liberal education represents a pedagogical philosophy aimed at cultivating intellectual autonomy, critical reasoning, and ethical judgment. Rooted in classical traditions and articulated in modern form by John Henry Newman, it emphasizes the development of an “enlarged mind” rather than narrow vocational training (Newman, 1852/1982).

The humanities form the intellectual core of liberal education by providing interpretive frameworks, ethical reasoning, and historical consciousness. However,

contemporary higher education systems have increasingly shifted toward market-oriented, skill-based models, leading to the marginalization of liberal education (Collini, 2012). While NEP 2020 attempts to revive multidisciplinary learning, its implementation often remains largely skill-centric rather than epistemically transformative.

Over the past few decades, broader shifts in societal goals and economic priorities—particularly the transition from state-led to market-oriented economic systems—have contributed to the declining emphasis on liberal education and the growing prioritization of technical and vocational training. Consequently, the objectives of higher education appear to have shifted from cultivating reflective, responsible, and socially accountable citizens to producing a skilled, industry-ready workforce.

The implications of this shift are increasingly visible in the erosion of civic sensitivity, critical engagement, and social responsibility, raising concerns about the long-term coherence and harmony of society. While these trends are already perceptible, their deeper intellectual consequences—manifested in the weakening of critical inquiry and ethical reasoning—are likely to unfold more gradually, demanding careful scholarly attention.

**AI as an Epistemic Disruptor:** Artificial Intelligence (AI) has not simply emerged; it has evolved. Its adaptive nature has enabled a transformation from being a tool in the hands of a human agent to exhibiting characteristics of an agent in its own right. As long as AI functioned primarily as a tool, its role remained supplementary and complementary, contributing to the creation and dissemination of knowledge. However, with the emergence of agentic capabilities, AI has moved beyond being a contributor to epistemic content to becoming a potential disruptor of knowledge systems, posing new challenges to human cognition and agency.

Early engagements with AI positioned it as a tool that augments human cognition. However, generative AI systems now produce text, analysis, and arguments that closely resemble human intellectual output. This marks a transition from knowledge as human-centered interpretation to knowledge as human-AI co-creation. Recent research suggests that AI is not merely enhancing learning but reshaping cognitive processes themselves. The increasing reliance on AI for reasoning reflects a phenomenon of cognitive offloading, raising concerns about diminishing intellectual autonomy (Favero et al., 2026).

A more profound shift is underway with the emergence of agentic AI systems capable of autonomous decision-making, contextual adaptation, and independent execution of tasks. This evolution represents a transition from human-in-the-loop to human-on-the-loop and, increasingly, to human-out-of-the-loop systems. Traditional philosophical conceptions of agency, as articulated by Immanuel Kant, link autonomy with moral responsibility. AI, however, introduces a form of *functional agency*—goal-directed action without consciousness or moral accountability—thereby creating a fundamental tension between action and responsibility.

Consequently, humanity finds itself in a paradoxical situation: it is neither fully self-sufficient to avoid reliance on AI nor fully capable of exercising complete control over its evolving applications. Human engagement with AI is increasingly characterized by dependence coupled with uncertainty regarding outcomes.

At the same time, it remains an open question whether AI will remain a subject of human control or evolve in ways that significantly reconfigure human agency and authority. Rather than framing this as a deterministic outcome, it is more appropriate to view the present moment as one of epistemic indeterminacy, where the future relationship between human and artificial agency is still being shaped.

### **The Crisis of Measure: Collapse of Epistemic Criteria:**

The most profound implication of AI-driven transformation lies in what may be termed a “crisis of measure.” All knowledge systems depend on criteria that determine what counts as truth? What constitutes evidence? And what qualifies as understanding? Philosophical traditions have long interrogated these criteria. David Hume questioned the basis of causality, while Karl Popper emphasized falsifiability as a demarcation of scientific knowledge.

However, these frameworks remained grounded in human cognition. AI disrupts this grounding by enabling, generation of coherent outputs without understanding, the simulation of reasoning without intentionality, and the production of knowledge-like artifacts without accountability. As recent scholarship highlights, AI systems can produce contextually relevant outputs without underlying comprehension, thereby challenging traditional epistemic validation (Holmes et al., 2024). This results in a decoupling between epistemic signals (appearance of knowledge) and epistemic grounding (justification of knowledge).

The destabilization of epistemic criteria gives rise to a condition that may be described as epistemic anomie – a breakdown of the norms and standards that govern the production and validation of knowledge. This condition manifests in multiple ways: erosion of trust in expertise, increasing difficulty in distinguishing authentic knowledge from generated outputs, and an overproduction of information accompanied by a relative decline of meaning.

Such developments resemble paradigm crises described by Thomas Kuhn, wherein existing frameworks become inadequate to explain emerging realities (Kuhn, 1962). Contemporary analyses further point to the emergence of *algorocratic tendencies*, where decision-making authority increasingly shifts from human agents to algorithmic systems (Gao et al., 2024).

This apparent “chaos” may be understood not merely as disorder, but as a transitional condition within a technology-driven society. It reflects a destabilization of long-standing epistemic and institutional frameworks that have historically guided human action through moral and ethical reasoning.

While it would be an overstatement to suggest a complete collapse of the social sciences, there are growing concerns

regarding the relative weakening of their normative influence in the face of rapidly expanding technology-driven knowledge production. Much of this transformation remains in its early stages- often subtle in its visibility, yet significant in its trajectory.

The central challenge, therefore, is not the absence of knowledge, but the absence of stable criteria through which knowledge can be interpreted, trusted, and applied. Navigating this condition requires the development of new epistemic frameworks that can integrate technological capabilities with human judgment, ethical responsibility, and critical reflection.

**Repositioning Humanities in the Age of Agentic AI:** In the transformed epistemic landscape shaped by Artificial Intelligence, the role of the humanities undergoes a fundamental redefinition. Traditionally, the humanities have been concerned with the study of human agency, human action, and the social, cultural, ethical, and historical contexts within which such actions occur. Their enduring relevance has stemmed from their ability to interpret the ever-changing conditions that shape human behavior and collective life.

Unlike the natural sciences, whose objects of inquiry often remain relatively stable, the humanities engage with a dynamic and evolving subject matter. Human actions are continually influenced by changing social institutions, technological environments, cultural values, and economic structures. Consequently, the humanities have historically been required not only to preserve and interpret existing knowledge but also to challenge established assumptions, explore emerging realities, and reconstruct conceptual frameworks in response to changing circumstances.

The emergence of Artificial Intelligence presents a challenge of an altogether different magnitude. Previous technological advancements altered the conditions under which humans acted; AI increasingly participates in the processes of cognition, decision-making, and action themselves. As AI evolves from a passive tool into an active and adaptive agent capable of generating knowledge, making decisions, and responding dynamically to context, it begins to encroach upon domains that have traditionally been regarded as uniquely human. This development raises profound questions about the future of human agency and the extent to which decision-making, judgment, and interpretation may be delegated to autonomous systems.

In this context, the role of the humanities extends beyond the production and interpretation of knowledge. The humanities are increasingly called upon to interrogate knowledge systems themselves, examine the ethical implications of artificial agency, and reconstruct the epistemic criteria through which knowledge claims are evaluated and legitimized. The central questions are no longer confined to what humans know or how humans act, but increasingly encompass how knowledge is produced, who exercises agency, and what forms of responsibility remain meaningful in an age of intelligent machines.

Accordingly, the humanities become indispensable for addressing fundamental questions of responsibility, meaning, legitimacy, and accountability. They provide the conceptual and ethical frameworks necessary to evaluate the growing influence of artificial systems on human life and social institutions. Far from becoming peripheral in a technology-driven world, the humanities assume renewed significance as disciplines that preserve critical reflection, moral judgment, and human self-understanding.

The challenge before contemporary higher education, therefore, is not merely to incorporate Artificial Intelligence into existing curricula, but to rethink the purpose and orientation of education itself. If the defining question of earlier centuries was how human beings understand the world, the defining question of the present age may well be how humanity preserves meaningful agency and responsibility in a world increasingly shaped by artificial forms of intelligence and action.

In this transformed epistemic landscape, the role of the humanities undergoes a fundamental shift. Humanities, as a subject of study, deal with human agency and actions and the causes and contexts in general. The dynamic setting of context which determine human actions keep the subject matter ever-changing, throwing challenges to the existing, explore the new and rewrite the code. The emergent technology, particularly AI appears to challenge the human agency in decision making with a promising growth it would replace the human in areas that have evolved over the development of civilization.

**Implications for Undergraduate Education under NEP 2020:** The restructuring of undergraduate education under NEP 2020 must move beyond a narrow focus on skill acquisition and employability to engage with the deeper epistemic implications of Artificial Intelligence. While the policy rightly recognizes the importance of preparing students for a rapidly changing technological environment, the current discourse often emphasizes *how to do* at the expense of *why to know*. This shift from foundational inquiry to procedural competence risks weakening the very purpose of higher education.

Traditionally, education has been concerned not only with imparting skills but also with cultivating the capacity to question, reason, and understand the origins, validity, and implications of knowledge. The growing emphasis on skill-oriented learning tends to privilege methods, techniques, and applications while neglecting the epistemic foundations that give meaning and direction to human action. As a consequence, students increasingly focus on accepting what is presented to them and learning how to perform tasks, rather than engaging in critical inquiry into why things are the way they are.

This concern becomes particularly significant in the age of Artificial Intelligence. As AI systems become increasingly capable of performing procedural, analytical, and even creative tasks, the value of education cannot remain confined to the acquisition of operational skills alone. If intelligent systems progressively assume responsibility for answering questions of “how to do,” an educational

framework centered exclusively on procedural competence risks becoming obsolete. The enduring value of higher education will lie in developing students' capacity to understand how knowledge is produced, validated, contested, and applied, including the role played by AI systems in these processes. In this sense, **epistemic literacy** becomes as important as digital literacy.

**Ethical and Normative Reasoning:** The growing replacement or augmentation of human cognitive functions by AI introduces profound ethical and normative challenges. Historically, the humanities have played a crucial role in examining questions of human agency, responsibility, justice, and moral choice. Ethical and normative frameworks have guided human action and helped preserve social cohesion while adapting to changing historical and cultural contexts.

However, the simultaneous rise of AI and the relative decline of humanities education in many higher education systems create a potentially problematic situation. AI-driven decision-making increasingly influences areas such as governance, employment, healthcare, finance, and education, yet these systems operate within ethical frameworks that require human oversight and accountability. Without adequate grounding in ethics, philosophy, history, and social thought, future generations may possess technological competence without the intellectual resources necessary to evaluate the broader consequences of technological decisions.

Therefore, undergraduate education must place renewed emphasis on ethical reasoning, moral reflection, and social responsibility. Students must be equipped not only to use AI systems but also to critically evaluate their assumptions, limitations, biases, and societal implications.

**Interdisciplinary Integration:** The contemporary moment underscores the need for convergence rather than divergence between traditional and emerging domains of knowledge. The challenges posed by AI cannot be adequately understood through technological expertise alone, nor can they be addressed solely through conventional disciplinary frameworks.

The future of higher education lies in meaningful interdisciplinary integration, where the humanities, social sciences, and technological disciplines engage in continuous dialogue. Emerging technologies should not merely enhance efficiency and productivity; they should deepen human understanding and contribute to the development of a more humane and sustainable society.

Accordingly, humanities education must be integrated with technological and scientific learning, enabling students to understand not only how systems function but also why they matter, whom they serve, and what consequences they produce. Such integration would ensure that technological advancement remains aligned with human values, social responsibility, and democratic ideals.

Ultimately, the challenge before NEP 2020 is not simply to prepare students for the jobs of the future, but to prepare

them for responsible participation in a society where knowledge, agency, and decision-making are increasingly shared between human and artificial systems. The central task of higher education, therefore, is to cultivate reflective individuals capable of navigating this emerging epistemic landscape with critical awareness, ethical judgment, and intellectual autonomy.

## 2. Conclusion

The restructuring of undergraduate education under NEP 2020 has largely been justified in terms of technological change, employability, and the requirements of an evolving labour market. While these concerns are undoubtedly important, this paper has argued that the rise of Artificial Intelligence presents a challenge that extends far beyond questions of skills and employment. AI represents an epistemic transformation that is altering not only how knowledge is accessed and disseminated, but also how it is produced, validated, interpreted, and applied.

Historically, technological advancements have served as instruments that enhanced human capabilities while leaving the foundations of knowledge systems largely intact. The emergence of generative and agentic AI marks a significant departure from this trajectory. As AI evolves from a tool into an increasingly autonomous participant in cognitive and decision-making processes, it challenges long-standing assumptions regarding human agency, intellectual authority, and the criteria through which knowledge claims are evaluated. The resulting "crisis of measure" reflects a broader instability in the epistemic foundations that have historically guided education, research, and public reasoning.

In this context, the humanities acquire renewed significance. Their relevance no longer rests solely on the preservation of cultural heritage, ethical reflection, or historical understanding. Rather, they become indispensable for interrogating the changing nature of knowledge itself, examining the ethical implications of artificial agency, and reconstructing the normative frameworks necessary for responsible human action. The humanities thus move from the margins of contemporary educational discourse to the centre of a broader civilizational conversation concerning meaning, legitimacy, responsibility, and human self-understanding.

The paper further argues that liberal education, often marginalized in market-driven and skill-oriented models of higher education, offers an important intellectual framework for responding to these transformations. By cultivating critical inquiry, epistemic awareness, ethical judgment, and intellectual autonomy, liberal education equips students not merely to adapt to technological change but to evaluate and shape it. In an age where intelligent systems may increasingly provide answers to questions of "how," the enduring purpose of higher education may lie in enabling learners to ask and critically examine questions of "why."

Accordingly, the implementation of NEP 2020 must be understood as more than an exercise in curricular restructuring or workforce preparation. It presents an

opportunity to rethink the philosophical foundations of higher education itself. The central challenge before universities is not merely to produce graduates who can function effectively alongside intelligent machines, but to cultivate individuals capable of preserving human agency, ethical responsibility, and critical judgment in an increasingly autonomous technological environment.

The future of higher education, therefore, will depend not on choosing between technology and the humanities, but on forging a meaningful synthesis between them. Such a synthesis must ensure that technological advancement remains anchored in human values and that the pursuit of knowledge continues to serve the broader goals of human flourishing, democratic citizenship, and civilizational progress. The ultimate question confronting education in the age of Artificial Intelligence is not whether machines can think, but whether human beings can retain the capacity to reflect, judge, and act meaningfully in a world increasingly shaped by artificial forms of intelligence and agency.

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