

The Ghost of the Author: Mechanisation, Metricisation and Narrative Contraction in the Age of AI

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Abstract: This article examines the crisis of scientific writing in the age of artificial intelligence (AI) not as a sudden, isolated technological rupture, but as the inevitable consequence of a long-term structural transformation. Arguing that AI has not created this crisis but rather made pre-existing contradictions visible, the study grounds its argument on four primary axes: the historical rhetorical construction of scientific discourse, the transformation of the IMRAD (Introduction, Method, Results, Discussion) format into an unquestionable normative model, the profit-driven political economy of academic publishing monopolies, and the increasingly ambiguous status of authorship in the context of large language models. Drawing on Michel Foucault's conceptualisation of knowledge-power, Thomas Kuhn's approach to normal science, and Peter Fleming's critique of academic capitalism, this analysis reveals how the current system rewards only measurable and rapidly circulable outputs while marginalising theoretical risk-taking and critical depth of interpretation. The article highlights that the discrepancy between detected and declared AI use in academic production points to a severe transparency problem. As texts become standardised, measurability increases; AI, in turn, reproduces these forms perfectly, thereby radically narrowing epistemic and narrative diversity. Proposing three potential future scenarios – full automation, the resurgence of creative theoretical writing, and the coexistence of a dual literature structure – the study concludes that a permanent solution lies not in superficial technical fixes, but in profound structural interventions. These include the radical restructuring of the publishing economy, the elimination of academic precarity, and the revalorisation of non-standard, critical forms of writing. The critique developed here is directed primarily at the empirical natural and social sciences, where IMRAD-based writing and metric pressures are most acute, though the structural forces identified – academic capitalism, publishing monopolies, and AI optimisation – operate system-wide.

Keywords: scientific discourse, IMRAD, authorship, artificial intelligence, paradigm, narrative, epistemic crisis, academic capitalism, labour exploitation

Acknowledgement: The author is grateful to the editor Thomas Allmer, reviewer Larry Liu (Morgan State University), and one anonymous reviewer for their constructive feedback and valuable suggestions, which have substantially improved the manuscript

1. Introduction

Since Roland Barthes declared the death of the author, considerable time has passed (Barthes 1977). Over the past few years, the academic community, in particular, has been debating with anxiety and apprehension whether, in the wake of an artificial intelligence “coup”, an author remains whose funeral could be held at all. Yet this anxiety is, ironically, a product of the very thing it critiques itself: a system in which an academic question is only considered legitimate when expressed in an academic journal, in a prescribed format, and in a prescribed language.

Scientific writing is one of the most visible forms of epistemic authority in modern societies. An academic article is not merely a vehicle for conveying research findings; it is simultaneously an institutional regulatory mechanism that determines how knowledge is to be produced, how it is to be presented, and in what forms it is to be considered legitimate. For this reason, scientific writing is fundamentally an epistemological and sociological concern, irreducible to technical composition. Language is not merely a tool of communication; it is the domain in which knowledge is constructed and classified, and power relations are reproduced.

The standardisation of academic writing, the rise of large language models, and the consolidation of publishing monopolies are not parallel developments that happen to intersect; they are mutually reinforcing pressures that share the same structural logic.

The fundamental question is this: Is artificial intelligence bringing scientific writing to an end, or is scientific writing already so thoroughly mechanised that it can be readily taken over by AI? In order to answer this question, it is necessary to examine together the historical formation of scientific discourse, its paradigmatic structure, the political economy of publishing, recent empirical findings on the use of AI, and the transformation of the authorship category. At the intersection of these axes, the true dimensions of the crisis in which scientific writing currently finds itself will become more clearly visible.

The epistemic narrowing of scientific discourse feeds a discursive crisis of homogenised writing, which in turn reflects the economic logic of publishing monopolies that devalue academic labour – a logic now extended to the legitimacy of authorship itself as AI-assisted production grows.

This study is not an empirical research project based on data production; it is a critical theoretical analysis. Methodologically, it combines discourse analysis with a political-economic approach. The discourse analytical dimension operates at the level of genre and format critique, drawing on Bazerman (1988), Swales (1990), and Foucault (1972, 1998), rather than corpus analysis. The article analyses how the IMRAD (Introduction – Methods – Results – Discussion) format functions as a discursive norm that regulates epistemic behaviour: this is closer to what Foucault called the “archaeology of knowledge”, which identifies the rules that determine what counts as a

legitimate scientific statement, than to corpus-based or conversation-analytic approaches. On the political-economic side, it analyses the effects of academic capitalism on the publication regime through secondary data and current publication statistics. The aim is to frame post-AI scientific writing as a problem of discursive, institutional, and political structure rather than a merely technical matter. The study thus takes the character of a critical theoretical essay that includes a normative intervention. The central thesis advanced here is the following: the crisis of scientific writing is not a data deficit but a narrative contraction, and this contraction cannot be evaluated independently of the political economy of academic capitalism. AI does not initiate this contraction; it renders these structural tensions more visible, and in doing so accelerates them. Addressing the crisis, therefore, requires structural transformation of the incentive regimes governing knowledge production, not technical fixes.

The article proceeds as follows: first, the rhetorical and historical character of scientific discourse is addressed; then, the normativisation of the IMRAD format and its effects on the paradigm are examined. Following a detailed assessment of academic capitalism and the political economy of publishing, the rise of AI in scientific writing is examined with statistical data and the transformation of the authorship category is discussed. Finally, possible future scenarios are assessed, and proposals for structural transformation are presented.

2. The Rhetorical Character of Scientific Discourse

2.1. The Dissolution of the Myth of Objectivity

In the second half of the twentieth century, the philosophy and sociology of science seriously questioned the positivist assumption that scientific texts are purely objective reflections of reality. Gross's (1990) work demonstrated that scientific articles contain rhetorical strategies, drawing attention to the persuasive function of scientific discourse. According to Gross, scientific texts do not "present" data; they legitimate it within a particular narrative organisation. Scientists, in conveying their findings, must simultaneously prove that those findings are reliable, original, and consistent with community norms. This persuasive dimension is an unavoidable part of scientific text.

Similarly, Latour (1987) demonstrated that scientific facts are constructed through laboratory practices and discursive networks. Latour's "black box" metaphor explains that established scientific facts are, in fact, products of intensive processes of negotiation and persuasion, and that once accepted, this construction process becomes invisible. From this perspective, the claim that scientific text "merely conveys facts" emerges as an ideological fiction.

This ideological pressure extends directly to form: the mechanisation of scientific writing is connected to the radicalisation of the ideal of neutrality. Objectivity has gradually become equated with stylelessness and anonymity. The suppression of the author's voice – passive constructions, vague subjects, impersonal narration – reflects not objective reality but an expectation of institutional conformity. This institutional

transformation demonstrates how the credibility mechanisms of scientific discourse can be reduced to rhetorical devices. It is worth noting that this critique of positivist standardisation has deep roots in the continental philosophical tradition. The Positivist Dispute (Positivismstreit) in German sociology – the debates between Adorno, Habermas, Popper, and Albert in the 1960s – revolved precisely around the status of objectivity, the role of critique, and the epistemological limits of positivism in the social sciences (see Adorno et al. 1976). These debates demonstrate that the current AI moment is not a rupture but the latest episode in a longer struggle over the legitimate form of scientific rationality.

Alongside the works of Gross and Latour, one of the most comprehensive historical studies of the rhetorical structure of scientific writing belongs to Bazerman (1988). Bazerman documents in detail how the experimental article as a genre has been shaped from the seventeenth century to the present and how it has become intertwined with the practices of scientific communities. This historical perspective makes the artificiality of the absolutisation of the current IMRAD format all the more apparent. The format in question is not the expression of a universal and necessary scientific truth; it is a convention that arose from the practical needs of a particular historical period and gradually acquired an ideological status.

Kahneman and Tversky's behavioural economics research demonstrated that humans think with systematic biases and tend to avoid ambiguity (Kahneman 2011). This finding carries significant meaning in the context of scientific writing: standardised formats reduce the capacity to tolerate ambiguity and push researchers towards the safe boundaries of habitual patterns. Mechanisation inevitably leads to a poverty of meaning but simultaneously functions as a practical refuge that dispenses with institutional anxieties.

2.2. The Historicity of Genre and Format

Swales's (1990) work established that academic writing genres are historically constructed by discourse communities. The formal characteristics of a genre reflect the epistemic values, power relations, and practical needs of that community. Although the IMRAD format was developed for the purpose of methodological transparency, it has been transformed into a normative and mandatory structure over time. This transformation has produced three significant consequences: reducing the research process to a linear narrative, rendering processes of uncertainty and failure invisible, and minimising the interpretive tone of voice. It should be noted that IMRAD is primarily hegemonic in empirical natural and social sciences; theoretical and critical writing, including the kind published in journals such as *tripleC*, does not necessarily operate within this format. The argument advanced here is that IMRAD has come to function as a symbol of "scientific legitimacy" more broadly, exerting normative pressure even in domains where it is not formally required. This constructivist understanding of scientific formats is consonant with the broader tradition of Science and Technology Studies (STS). Scholars such as Woolgar (1988) and Knorr Cetina (1999) have shown how laboratory

inscription devices and representational practices actively shape what counts as scientific knowledge – lending further support to the argument that format is never merely a neutral container.

Nobel laureate scientist Medawar (1964) argued that the IMRAD structure misrepresents the actual flow of scientific thought. According to Medawar, this structure, which conceals the chaotic, trial-and-error, and non-linear nature of the research process, presents science not as a process of discovery but as the application of a pre-determined procedure. This mode of presentation not only renders science incomprehensible but also damages the social legitimacy of science, for it conceals the deep gulf between the process communicated to the public and the process actually lived.

The rigidification of genre norms also makes interdisciplinary production more difficult. Forms of inquiry drawn from the humanities – philosophy, literary criticism, or history – are incompatible with the IMRAD standards of the natural sciences; this situation structurally constrains dialogue between disciplines. Yet a large proportion of the paradigm shifts that have occurred in the history of science have germinated at points of interdisciplinary contact.

The IMRAD format is not in itself the cause of intellectual monotony, but it produces this effect under certain incentive systems. The relationship between form and epistemic outcome is mediated not directly but through institutional intermediaries. When performance metrics such as citation count, publication speed, and index visibility reward conformity to IMRAD, the format ceases to be merely a technical regulation and becomes a norm that guides epistemic behaviour. The problem, therefore, is not the existence of the format, but its imposition as the sole valid model, excluding alternative writing regimes.

2.3. Scientific Over-Production and the Loss of Quality

The mechanisation of scientific writing has acquired not only a formal dimension but also a quantitative one. As of 2025, approximately five million new scientific articles are published per year; this rapid growth in publication volume has brought the peer review system to the point of collapse (CNRS [French National Centre for Scientific Research] 2025b). By 2023, the annual number of retracted articles had approached 10,000 (Van Noorden 2023a). Concurrently, the scale of fraudulent and fabricated paper production has emerged as a distinct and compounding crisis (Van Noorden 2023b). It should be noted that this rise is not straightforwardly diagnostic: it may reflect improved detection mechanisms and greater publication volume as much as genuine quality decline. Taken together with other structural indicators, however, the trend is consistent with a system under pressure rather than one engaged in effective self-correction.

In the words of CNRS researcher Didier Torny, many authors today aim “not to be read but simply to go unread” (CNRS 2025b); articles are designed primarily to appeal to bibliometric algorithms, enabling researchers to artificially inflate their CVs (CNRS 2025b). Since this observation is drawn from institutional communication, it should be

interpreted not as a verified empirical finding, but rather as a practitioner's field observation. Its significance stems from its alignment with a broader pattern documented across multiple independent sources.

Since the 1980s, the number of articles has increased approximately fivefold, yet a large portion of this increase reflects not an improvement in research quality but a systematic consequence of "publish or perish" pressure (CNRS 2025b; Larivière, Haustein, and Mongeon 2015). This disproportion is a structural indicator that an increasing proportion of production is oriented towards career engineering rather than original knowledge contribution.

3. Paradigm and Discursive Homogeneity

3.1. The Conservative Nature of Normal Science

Kuhn (1962) argued that scientific progress does not occur linearly but through paradigm breaks. During periods of normal science, researchers work within the boundaries of the dominant paradigm; anomalous findings are ignored, or attempts are made to accommodate them within the existing framework. Paradigms are constructed not only through data but also through discourse. If discourse is homogeneous, non-paradigmatic thinking is not merely rejected; it loses even the capacity to find an appropriate language in which to be expressed.

The consequence is stark: the homogenisation of writing form leads to the homogenisation of thought. Non-paradigmatic ideas often cannot secure funding, cannot be published, or are filtered out during the peer review process. Scientific writing thereby assumes a conservative function through this mechanism: it reproduces the existing order of knowledge and keeps those who question it on the outside. This exclusionary mechanism is most often not intentional; the order itself operates by rewarding conformity and penalising deviance.

This raises a further theoretical question: Do the large language models on which AI tools are based reproduce normal science, or do they pave the way for paradigm breaks? The great majority of the training data on which these models are built consists of existing academic literature; consequently, these models have internalised the discursive patterns of the dominant paradigm in Kuhn's sense and are prone to reproducing them. This characteristic bears the risk of transforming large language models from powerful research tools into paradigm guardians. On the other hand, the capacity they demonstrate for making interdisciplinary connections may open doors to unexpected theoretical syntheses; this dual potential has not yet been sufficiently investigated.

Indeed, when young researchers enter the academic system, they learn to write texts that follow rules rather than break them. This learning process is not merely formal; it is an intellectual shaping. Venturing outside IMRAD or attempting an unfamiliar mode of inquiry carries a calculable career risk. Thus, the tradition of scientific writing passed down from generation to generation prioritises conformity rather than questioning.

Large language models represent the statistical concentration of dominant literature. Since training data consists largely of existing academic publications, these models optimise the discursive average of normal science. This structurally renders them conservative in the production of non-paradigmatic thought. Yet the same models also possess the capacity to bring together interdisciplinary concepts in unexpected ways. Accordingly, AI is neither a direct paradigm guardian nor a revolutionary subject; what is determinative is within which epistemic incentive system it is used. If the academic evaluation regime rewards conformity rather than innovation, AI will serve the automation of normal science.

To clarify the underlying mechanism, the argument can be summarised as a cumulative transformation: First, the mechanisation of scientific writing introduces standardised formats (e.g., IMRAD) that privilege modular, segmented, and decontextualised knowledge units. Second, these standardised formats become metrically tractable, enabling audit systems, citation counting, and performance evaluation regimes. Third, this metricisation incentivises further standardisation, reinforcing conformity in writing practices. Fourth, large language models are trained on precisely this already-standardised corpus, which makes such formats computationally optimisable and reproducible at scale. Finally, mechanisation produces standardised formats that become metrically tractable. This, in turn, incentivises further standardisation. As AI optimisation accelerates this self-reinforcing loop, the ultimate result is a contraction of epistemic and narrative diversity. AI does not initiate this process but accelerates and stabilises it by rewarding precisely those forms of writing that are most easily machine generated.

3.2. A Critique of Methodological Monism

Feyerabend (1975) criticised scientific methodological monism and defended pluralism. According to Feyerabend, science is historically heterogeneous; rigid rules can impede progress. This position, summarised as “anything goes,” is not methodological anarchism but a warning against methodological dogmatism. Looking at the history of science, one sees that many of the most radical advances have come from researchers who refused to conform to established methods.

Today, journals attach more importance to structural conformity, citation counts, and methodological orthodoxy than to content. The dogmatisation of IMRAD constitutes a structural obstacle to pluralism. Writing that does not take formal risks also tends not to take intellectual risks. Over time, this cycle produces an effect that homogenises scientific production in terms of content and thereby narrows the collective accumulation of knowledge.

Moreover, this homogenisation reinforces a geographical inequality. The dominance of English in the academic world and the adoption of the IMRAD format as a universal guide either render knowledge production forms originating from outside the West invisible or force them to conform to dominant patterns. The pluralism claimed in global knowledge production thus conceals a structural uniformity behind a formal equality. What changes in the age of AI is that this uniformity becomes self-reinforcing at a new

speed: large language models trained predominantly on existing indexed literature reproduce and amplify the dominant paradigm, making the production of non-paradigmatic thought not merely risky but structurally improbable. The geographic and epistemic exclusions already built into the writing regime are thus reproduced at scale by AI systems that have internalised those exclusions as statistical norms.

4. Knowledge-Power and Authorship

Foucault's analysis of knowledge-power is of critical importance for understanding the regulatory character of scientific discourse. Foucault (1972) demonstrated that discourse does not merely produce knowledge; it also determines which statements are to count as knowledge, who has the right to speak, and which regime of truth is to be considered valid. From this framework, scientific discourse emerges as a field in which power relations are produced.

Foucault's (1998) concept of the "author function" shows that authorship is not an individual subject but a regulatory category. The author function is a function that classifies texts, constrains their interpretations, and determines responsibility. The scientific author, within this framework, represents not a creative subject but an institutional positioning. The name at the end of an article is not the expression of individual creativity but of an institutional affiliation, a methodological commitment, and a membership in a disciplinary community.

In this environment, where structural fetishism has transformed scientific writing into a technical procedure report, texts that take risks are filtered out, essay-like theoretical writings remain outside the index, and young researchers are compelled to write safely. The result is texts that are methodologically impeccable but intellectually timid. This is not merely an individual loss; it is the structural limitation of collective knowledge production.

The most concrete form in which the power of discourse is materialised in scientific writing emerges in the process of decisions about which research is considered worth publishing. The peer review system is the fundamental mechanism through which these decisions are legitimised and disciplinary norms reproduced. The anonymity of reviewers does not make this process transparent; on the contrary, by dispersing responsibility, it transforms the application of norms into a disciplinary mechanism independent of personality.

Foucault's analysis brings into relief the fact that the formal rules of scientific writing actually draw epistemic boundaries. The obligation to use an "objective" language, while commanding that interpretation and perspective be erased from the text, renders a particular perspective, that of the dominant paradigm, ordinary and invisible. This invisibilisation mechanism is what most effectively preserves the power dimension of scientific discourse: even critique itself is compelled to be voiced by conforming to the rules of the discourse it critiques.

In this framework, the question of "who is allowed to speak" carries separate importance. In academic writing practice, from which institutional position you write, in

which language you write, and to which methodological tradition you belong determine how your argument is received, independently of the content of that argument. That researchers from the Global South can only be heard in international literature when they conform to Northern norms is one of the most concrete and least discussed manifestations of this power asymmetry. The claim of scientific universality here conceals a structural inequality. In the age of AI, the knowledge-power dynamics Foucault identifies acquire a new dimension: the “author function” is not only regulated by institutional norms but is increasingly delegated to systems that have internalised those norms at the level of their statistical architecture. When an AI tool assists in writing, it does not produce a neutral text; it produces a text shaped by the discursive regularities of the dominant academic tradition. The power relations embedded in scientific discourse are thus reproduced not by individual disciplinary actors but by the infrastructure of knowledge production itself.

5. Academic Capitalism and Dark Academia

Reading the mechanisation of scientific discourse solely as an epistemological or methodological process remains incomplete. Underlying this process is a structure that Fleming (2021) has analysed in detail: academic capitalism. According to Fleming, the contemporary university is no longer the free-thinking institution of the Enlightenment but an institutional structure that prioritises profit, efficiency indicators, and market alignment. Knowledge production has ceased to be a process in which original ideas are generated; it has been transformed into manageable, measurable, and reportable outputs.

Fleming (2021) positions academics as both producers and victims of the university. Academics are compelled to continuously publish, apply for grants, and remain visible within citation indices in order to justify their existence. This situation is the natural enemy of creative thought; for creativity requires time, requires “deviance,” requires a willingness to magnify uncertainty. Academic capitalism, by contrast, demands short-term, measurable, and brandable outputs.

Fleming documents that universities are increasingly adopting neoliberal management understandings, with the number of administrators increasing while the secure employment conditions of academic staff deteriorate. This managerial structure generates precarity and compels academics to submit to the system: to keep their writing within templates, to select safe topics, to conform to journal guidelines. Scientific creativity is systematically ground down under this metric pressure.

Slaughter and Leslie (1997) theorised universities’ market-oriented behaviours and the commodification of knowledge. The concept of academic capitalism expresses the fact that universities shape their research activities according to market logic and that academics internalise this logic. This market-driven transformation has fundamentally altered research priorities, academic identity, and the public function of science.

The broader critical political economy literature on the neoliberal university – encompassing audit culture, metric regimes, and the precarisation of academic labour –

has accumulated substantially over the past two decades, well beyond Fleming's single interpretive framework. The *tripleC* special issue on *Academic Labour, Digital Media and Capitalism* (Allmer and Bulut 2018) addressed many of these structural dynamics from a critical political economy perspective, situating the commodification of knowledge within wider circuits of capital accumulation and institutional governance. The structural pressures documented across this literature, including audit culture, precarious employment, and the commodification of research outputs, are precisely those that shape the writing practices examined here.

Wilsdon et al. (2015) comprehensively analysed the unintended consequences of metrics on research culture. It was demonstrated that citation counts and journal impact factors drive researchers towards risk avoidance, towards orienting themselves to safe topics, and towards producing a large number of short-term publications. The San Francisco Declaration on Research Assessment (DORA), developed in response to this metric pressure, calls for the qualitative assessment of the content of research in its own right. Yet this call produces a limited effect in practice without changes to institutional incentive structures.

From here, it is possible to arrive at a critical inference: the mechanisation of scientific writing is not merely a matter of writing culture; it is simultaneously the linguistic manifestation of the disciplinary mechanism of the capitalist university over academics. The researcher who standardises in writing also standardises in thinking; the researcher who standardises in thinking gradually loses their intellectual autonomy. The profit rates that emerge in the academic publishing model reflect not merely market success but the asymmetric distribution of surplus value created in the process of knowledge production. Researchers transfer the text they have produced with public resources at no cost, reviewers perform evaluations unpaid, a significant proportion of editorial labour proceeds based on academic voluntarism, yet the economic value produced concentrates within the publishing house. This structure differs from classical wage labour exploitation; what is at issue is the integration of voluntary academic labour into the system through institutional prestige and performance pressure. The commodification of knowledge takes place here not merely at the level of the product but in the writing practice itself.

6. Academic Publishing Monopolies: Knowledge Economy as Labour Exploitation

One of the most striking manifestations of academic capitalism is concretised in the economic model of large academic publishing companies. Five major publishers – Elsevier, Springer Nature, John Wiley & Sons, Taylor & Francis, and SAGE Publications – control more than half of this sector, which generates 25 to 34 billion dollars in annual revenue (Larivière, Haustein, and Mongeon 2015; Curcic 2023). These publishers possess profit margins that at times reach 40 percent, surpassing even technology giants like Google and Amazon (Curcic 2023; Xiao, An, and Williams 2024). These profit margins are not the product of an exception found nowhere in any other knowledge industry but of systematic labour exploitation.

Publisher	Approx. Journals	Annual Revenue (billion \$)	Profit Margin (%)	Primary Model
Elsevier (RELX)	~2,500	~3.8	35–40	Subscription + APC
Springer Nature	~3,000	~2.1	25–30	Subscription + APC
Wiley-Blackwell	~1,700	~1.6	20–25	Subscription + APC
Taylor & Francis	~2,900	~0.9	15–20	Subscription + APC
SAGE Publications	~1,000	~0.7	15–20	Subscription + APC

Table 1: Economic Profile of Major Academic Publishers (2023–2024). Source: Compiled from data in Larivière, Haustein, and Mongeon (2015), Curcic (2023), and Xiao, An, and Williams (2024).

The striking aspect of this profit model lies in how labour is organised. At the start of the academic publishing chain stand researchers; they produce their articles as the result of research predominantly financed by public funds and submit these articles to publishers at no cost. Reviewers, too, submit their labour to these companies without payment. Publishers then format the text and charge high subscription fees from individuals and institutions. This structure constitutes a distinctive capitalist model in which academic and reviewer labour is effectively organised in the form of voluntary labour or self-exploitation (Buranyi 2017; Willinsky 2006).

Researchers compelled to act under the pressure of “publish or perish” reinforce the monopoly of publishers: the researcher prefers these companies’ journals in order to appear in citation indices, yet each repetition of this preference legitimises the structural dominance of the publisher. This closed loop, which Fleming (2021) also emphasises, reproduces the system spontaneously and operates in deep harmony with the prevailing economic order.

In academic publishing, the problems experienced are not limited to the formal transformation of scientific text; structural distortions in evaluation practices also feed this structural transformation. Chief among these problems is the misleading identification established between index and quality. A journal’s impact factor does not measure the value of the individual article or researcher published in that journal; it reflects the journal’s overall citation average. Equating these two quantities produces a systematic error that evaluates individual production through journal prestige, reducing research evaluation from a qualitative process to a numerical scan (DORA 2012). The design of career and funding mechanisms in an index-focused manner feeds the

“publish or perish” culture and drives researchers towards producing rapid, indexable outputs rather than original and long-term studies (Edwards and Roy 2017).

In the article-processing charge (APC) model, major publishers charge between 2,000 and 12,000 dollars per article. The open access movement, advanced with claims of public benefit, has been internalised by publishers through this manoeuvre, with the payment point shifted from reader to author (Larivière, Haustein and Mongeon 2015; Butler et al. 2023; Mirowski 2018). The result is the continuation of an absurd cycle in which the public finances the research, the academic writes without payment, the reviewer assesses without payment, and the university purchases access by paying high subscription fees.

A significant portion of articles published in these journals receive no citations or are never read after publication; this rate climbs to 32 percent for the social sciences and 82 percent for the humanities in measurements carried out over five-year windows (Remler 2014; Eveleth 2014). According to Hamilton’s (1990) finding, 55per cent of articles published between 1981 and 1985 received no citations during the five years following publication. The economic cost of this situation belongs not only to the publishing sector but to the public. These structural dysfunctions are not isolated anomalies but form part of a broader constellation of systemic problems afflicting scholarly publishing, ten of which have been comprehensively mapped by Tennant et al. (2019), whose analysis confirms that the issues identified here are extensively documented across the wider literature.

One of the principal reasons for the rapid growth of preprint platforms in recent years is the operation of this academic publishing machinery. Platforms such as arXiv (1991), bioRxiv (2013), and medRxiv (2019) have raised the speed at which knowledge circulates while opening the authority of the traditional peer review mechanism to question (Abdill and Blekhman 2019; Fraser et al. 2021). The institutionalisation of preprint culture during the COVID-19 pandemic concretely demonstrated how functional this alternative model can be in emergency situations.

7. The Narrative Dimension: Science and Story

Scientific writing has long been idealised as a form purged of narrative. Narrative appeared to belong to the domain of the emotional and subjective; it was carefully kept at a distance from objective scientific discourse. Yet this boundary is indefensible both epistemologically and practically. Schimel’s (2012) work argues that scientific text needs a narrative structure in order to be effective: a research question, a context as to why that question is important, findings, and an interpretation of those findings. Even a scientific article, at its core, is based on an organisation of problem, tension, and resolution. Yet this most often remains in the background, and even a hierarchical “ranking” has been “constructed” among article types.

The distinction between research articles and review articles is where this hierarchy is most visible. In the social sciences and humanities, the sharp distinction between “research article” and “review article” has itself become a subject of critique.

Approaches that argue in particular that the production of disciplinary knowledge cannot be reduced solely to “new data” emphasise that theoretical and interpretive works also offer original contributions. For example, Michel Foucault’s genealogical analyses or Clifford Geertz’s “thick description” approach are based not on the production of empirical data but on the reinterpretation of existing discourses, texts, and practices; despite this, these works have produced discipline-founding effects (Foucault 1972; Geertz 1973). Similarly, the meta-analysis and systematic review literature has also shown that reviews are not merely summarising texts but methodologically original and result-producing texts (Gough, Oliver and Thomas 2017). The methodological diversity inherent to review-based scholarship has been further documented by Grant and Booth (2009), whose typology of fourteen distinct review forms demonstrates that synthesis work encompasses a wide spectrum of epistemological approaches, each with its own validity criteria and original contribution. The challenge of integrating qualitative evidence within such frameworks has been similarly examined by Dixon-Woods et al. (2006), whose work underscores that methodological originality in review scholarship extends well beyond quantitative synthesis and cannot be adequately captured by IMRAD-bound evaluation criteria.

Polkinghorne (1988) argues that narrative knowledge is a paradigm with its own validity criteria, distinct from logical-scientific knowledge. The meaning of human experience is constructed by positioning events within a narrative fabric. From this perspective, the purging of narrative from scientific writing is not merely a question of style; it is an epistemological loss that renders invisible the human experience, uncertainty, and contextual meaning contained in the research process. Which question the researcher asks, why that question matters to them, and what the findings signify within a wider framework of meaning—none of these contaminate objective reality; they give meaning to it.

It is necessary to emphasise that narrative is determinative not merely for popular science but also for paradigm shifts. New theoretical frameworks most often require a new narrative order; reinterpreting established facts first requires discursive courage. Seen this way, the crisis in scientific writing is identical to a problem of the suppression of narrative. Science without narrative is not merely less-read; it is less-understood, and consequently ineffective in public life.

The tension between science and narrative is, in fact, the product of an artificial opposition. Looking at the history of the natural sciences, one sees that Darwin’s theory of evolution, Newton’s theory of gravitation, or Einstein’s theory of relativity spread not merely through mathematical formulae but through powerful metaphors, intuitive images, and narrative frameworks. This narrative dimension played a determining role both in the acceptance of theories within the scientific community and in their transfer to the public sphere. The mechanisation of scientific writing means forgetting this heritage.

The emergence today of “science communication” as a separate discipline is itself a confession of this rupture. The fact that scientific text has become unable to reach

the public has become so systematic that “translating” scientific knowledge “into the language of the public” is now defined as a separate profession requiring expertise. Yet this need for translation arises from scientific writing’s initial abandonment of narrative. The solution is not to transfer scientific text to the popular domain but to re-narrativise scientific text itself. Historical precedents make this point concretely. Darwin’s *On the Origin of Species* (1859) combined meticulous empirical observation with a sustained narrative argument – the gradual unfolding of a theory through accumulating evidence and imaginative inference – that was accessible to educated non-specialists and transformative for the scientific community simultaneously. Clifford Geertz’s “thick description” approach in *The Interpretation of Cultures* (1973) demonstrated that deep interpretive engagement with particular cases could yield generalisable theoretical insight without ever reducing the material to a formula. Michel Foucault’s genealogical analyses – in *Discipline and Punish* (1975) or *The Archaeology of Knowledge* (1972) – produced discipline-founding effects not through data production but through the reinterpretation of existing discourses, texts, and practices in a new narrative order. None of these works would pass through the standard IMRAD filter of a contemporary indexed journal. All of them have shaped their fields more profoundly than most compliant articles published in the same periods. What they share is discursive courage: a willingness to let the argument unfold at the pace and in the form that the object of inquiry demands. This is precisely the pace and form that the journal template no longer permits.

8. The Death of the Author and Artificial Intelligence

Barthes (1977) argued that the meaning of text had become independent of the author. The “death of the author” thesis maintained that the production of meaning arises not from the creative subject’s intentions and experience but from the text itself, from language, and from the encounter between reader and text. In this debate, production was still human-centred. Today, however, a more radical situation obtains: the author of text is indeterminate. Finding an author to place in the coffin has become difficult.

Large language models can synthesise literature, imitate academic tone, produce disciplinary jargon, and even write peer review reports. Kusumegi et al. (2025) show that AI use has accelerated article production, reduced barriers for non-native English speakers, and diversified the discovery of prior literature. Reimers and Waldfogel (2026) document that in the Amazon e-book market between 2022 and 2025, the monthly number of new books approximately tripled. While average book quality has declined, the quality of books at the top of the distribution has risen thanks to increased volume; experienced authors from the pre-AI era continue to produce quality work, while new authors publishing in the AI era predominantly produce low-quality content. Calibrated demand model simulations suggest that under a scenario of sustained production increase, consumer welfare could rise by 25 to 50 percent, implying that AI has a net positive effect for book readers, albeit a contested one (Reimers and Waldfogel 2026). Yet this “novelty” also brings certain concerns.

Crawford's (2021) work argues that AI is not a technical tool but a political and epistemic structure. AI systems are not neutral; they reproduce the biases, discursive patterns, and power relations of the data on which they are trained. The risks this situation carries for scientific text production have not yet been sufficiently debated. It is important to recognise, however, that the algorithmic mediation of academic knowledge did not begin with generative AI. Striphas's (2015) concept of "algorithmic culture" illuminates how cultural production (including scholarly knowledge) has long been shaped by ranking, sorting, and recommendation algorithms. Citation indices, journal impact factors, and database visibility scores already constituted an algorithmic layer governing what research was found, read, and rewarded, well before large language models entered the scene. Generative AI is therefore not a rupture in the relationship between algorithms and academic knowledge but an intensification of it: the same logic of automated selection and statistical normalisation that previously shaped what was read now shapes what is written. In this light, the concerns raised by Bender et al. (2021) about LLMs reproducing statistical patterns rather than generating understanding must be situated within this longer history of algorithmic mediation. Similarly, computational approaches to scholarly text – such as those explored by Rockwell and Sinclair (2016) in their work on computational hermeneutics – suggest that the relationship between algorithmic tools and humanistic interpretation need not be one of displacement. The decisive question is which institutional frameworks govern that relationship.

Akgün's (2025) work questions, through the paradox of the Ship of Theseus, what would remain if human authorship were gradually replaced by AI. If every section of an article has been written by AI but edited by a researcher, whose work is this article? If only the methods section were produced by AI, where would the boundary begin? These questions carry critical importance not merely from a copyright perspective but also with regard to scientific responsibility, originality, and the bases of the legitimacy of knowledge.

Floridi and Chiriatti (2020) emphasise that while models such as GPT-3 possess the capacity to process information, they lack the intentionality and consciousness that understanding requires. Bender et al. (2021) have characterised these models as "stochastic parrots," arguing that they do not understand language but merely recombine statistical patterns. These debates keep alive the fundamental question of whether texts produced by AI can be considered original scientific contributions. More recent scholarship has extended and nuanced these foundational critiques. Raitskaya and Tikhonova's (2025) scoping review of generative AI in scholarly writing maps a rapidly evolving landscape in which the epistemic risks identified by Floridi and Bender – fabrication of references, reproduction of disciplinary bias, opacity of reasoning – remain documented concerns even in the most capable current models. Thoumrungroje (2025) further argues that the efficiency gains offered by large language models in academic writing are inseparable from the ethical dilemmas they introduce around originality and authorial responsibility. Kusumegi et al. (2025) demonstrate empirically that

AI-assisted scientific production in the era of large language models changes not merely the pace but the epistemological texture of knowledge claims. Taken together, this body of work suggests that Floridi and Bender's conceptual concerns are not resolved by the technical advances of the post-GPT-3 generation of models. If anything, the scale of deployment has amplified the structural risks they identified.

The rapid proliferation of generative AI tools in academic writing processes has brought questions of research ethics and scientific integrity to the centre of literature in recent years. Studies from after 2024 show that there is a broad consensus to the effect that AI should be positioned in academic writing not as a fully productive subject but as a cognitive and technical support tool. While these tools can provide efficiency in phases such as literature review, text editing, summarisation, and language correction, they are noted to carry risks such as producing incorrect information, fabricating sources, and producing bias, as AI systems operate as probabilistic models. The research ethics literature accordingly states that AI use must be evaluated within the framework of principles of academic honesty, originality, and responsibility (Rentier 2025; Bittle and El-Gayar 2025; Cheng, Calhoun and Reedy 2025).

If scientific writing is already template-based, anonymous, and styleless, large language models easily reproduce this structure; and indeed they are already doing so. This shows something important: AI did not create the crisis in scientific writing; it has simply made the already existing tendency to reduce discourse to rigid procedures more visible and harder to ignore.

9. The Mechanisation Made Visible by Artificial Intelligence

Statistics arriving from the field of scientific publishing in recent months lay before us the dimensions to which this ontological crisis has reached. In the large-scale study by Liang et al. (2025), which analysed more than 1.1 million articles, AI use was found to have increased sharply across all academic fields following the public release of ChatGPT in November 2022. In the field of computer science, as of September 2024, up to 22.5 percent of article abstracts were found to have been modified or produced by large language models.

According to the comprehensive analysis relayed by Brainard (2025), AI-produced texts were detected in 36 percent of the abstract sections of 7,177 articles submitted to journals in the first half of 2025. Since these data rely on a single publisher's internal analysis and remain open to methodological critique, they should be interpreted with caution. Nevertheless, the underlying trend indicated by these findings aligns with data obtained from various independent sources. Therefore, this result should be regarded not as an absolute measurement, but rather as a reliable indicator of the phenomenon's scale. In the same analysis, only 9 percent of authors declared having used AI during the article submission process. AI use was detected in 7 percent of peer review reports in the final quarter of 2024. This finding points to a troubling possibility: peer review – the fundamental mechanism of scientific quality assurance – is also under threat of automation.

The most striking aspect of these figures is the deep gulf between the rate of use and the rate of declaration. While AI use is detected in 36 percent of articles, only 9 percent have been declared. This points to a systemic transparency crisis. Behind this concealment lies fear of rejection, but this fear is itself part of the problem: AI use is being evaluated in the category of academic fraud rather than being accepted as a legitimate auxiliary tool. This pattern of concealment reveals the absence of a clear and consistent ethical framework regarding how AI should be used in science.

The comparative analysis by Nathani et al. (2025) showed that texts produced by AI scored higher than human authors in terms of clarity and readability but fell behind in technical accuracy and depth. This finding explains the attractiveness offered by AI in an academic environment in which formal perfection takes precedence over depth of content. The more the system rewards form, the more value the tool that produces form acquires.

Particularly telling is the large-scale study by Hao et al. (2026), published in *Nature*, which analysed millions of scientific papers to assess the impact of AI tools on the breadth and depth of scientific production. Their findings supply direct empirical support for the central thesis of this article: while AI tools demonstrably expand the reach and visibility of individual researchers, they simultaneously contract the thematic and methodological focus of science as a whole. In other words, AI accelerates output while narrowing the epistemic landscape. Researchers assisted by AI tend to cluster around already dominant topics and established methodological frameworks, further reinforcing the conservative tendencies of normal science that Kuhn (1962) described. The paradox Hao et al. identify is structurally identical to the narrative crisis diagnosed here: more production, less diversity; greater individual impact, weaker collective imagination.

Measure	Pre-2022	2023	2024-2025
AI-modified abstracts in computer science (%)	–	~6	22.5
AI use detected in journal abstracts (%)	–	~8	36
Authors' rate of declaring AI use (%)	–	~5	9
AI use in peer review reports (%)	–	~2	7
Annual retracted articles (no.)	~3,000	~10,000	>10,000

Table 2: Data on AI Use in Academic Publishing (2022-2025). Source: Compiled from data in Liang et al. (2025) and Brainard (2025).

10. The Death of Creativity and the Future of Academic Employment

The systematic grinding down of creativity in scientific writing is not merely an epistemological loss; it carries the potential to transform in the medium and long term into a

structural dynamic that also threatens academic employment. The logic of this threat is simple but shattering: if a human can reduce what they do to a standard procedure, a machine can also perform that procedure.

The capitalist university understanding, to the extent that it prioritises profit and efficiency, evaluates the automation potential of every activity. If scientific publication production has been reduced to a certain standard and becomes a repeatable process, the automation of this process emerges as an economically attractive option. Large language models can already produce literature review drafts, methodology descriptions, and discussion section outlines. Recent cases of extreme AI-assisted publication volume – in which individual researchers have published dozens or even over a hundred articles within a single year – illustrate what this logic looks like when taken to its conclusion. These cases are not aberrations; they are the rational response of individual actors to an incentive system that rewards quantity of indexed output over originality, depth, or intellectual risk-taking. When the rules of the game remain unchanged while powerful new tools become available, the predictable result is an arms race. Academic credibility is simulated rather than earned.

The most immediate effect is task displacement, as routine writing and literature review – the work of research assistants and junior academics – becomes automatable. This opens into a deeper contraction: administrations favour a smaller number of supervisory roles over full research positions. At the far end of this trajectory lies a transformation of value itself: evaluation systems that already reward form over depth will increasingly rate AI-produced texts as superior, placing creative academics at a structural disadvantage (Nathani et al. 2025).

This process is self-reinforcing. Mechanisation draws AI into the academic field; AI's entry increases precarity; precarity tightens conformity to standard form; and tighter conformity deepens mechanisation. Breaking out requires structural transformation, not individual resolve. The DORA declaration and the proposals of Wilsdon et al. (2015) can be evaluated as part of this structural transformation. That such a transformation is achievable, even when deeply embedded in institutional culture, is demonstrated by Hatch and Curry (2020), who document cases in which research evaluation practices have been successfully reformed through sustained institutional commitment – pointing towards the conclusion that reform is a question of political will rather than structural impossibility.

11. Three Future Scenarios

The three scenarios presented below are analytical heuristics rather than predictions. They are intended to map the range of structural possibilities rather than to forecast a single outcome. Elements of each may coexist simultaneously across different disciplinary or institutional contexts: a field characterised by full mechanisation may operate alongside pockets of creative theoretical renewal, and the dual literature model may already be taking shape in some domains. What follows is therefore a structured exercise in scenario thinking, not a teleological account of where academic writing must

end up. Three trajectories seem plausible, depending on which of these forces gains the upper hand. They are not mutually exclusive – elements of each already coexist across disciplines – but their logic points in different directions.

11.1. Full Mechanisation

The majority of academic articles will be produced with AI assistance. The human researcher will be reduced to a data provider and supervisory function. Current trends reinforce this scenario: the detection of AI use in more than a third of articles as of 2025 indicates that this trend is continuing to accelerate (Brainard 2025). The dark academia that Fleming (2021) anticipates is the concrete expression of this scenario: an order in which knowledge-producing institutions prioritise the formatting of thought rather than the production of thought, and in which academics are becoming ever more easily substitutable. At the institutional level, Hall's (2026) projection of the "100x research institution" offers a concrete illustration of this trajectory: a model in which AI-amplified productivity renders individual scholarly labour structurally redundant, compressing entire research departments into a fraction of their current human footprint.

11.2. The Return of Creative Theoretical Writing

AI has unsettled the authorship category, but this unsettlement may, ironically, increase the value of human creativity. Bender et al. (2021) characterised large language models as "stochastic parrots," arguing that these models do not genuinely understand but merely recombine statistical patterns. What the machine cannot do is provide an original perspective, critical intuition, and the capacity for interdisciplinary connection. Texts that venture outside standard format, that take intellectual risks, that genuinely converse with the reader may regain value.

CNRS's ending of its Web of Science subscription as of 1 January 2026 and turning towards open alternatives such as OpenAlex can be evaluated as a concrete step in the direction of encouraging a research culture that prioritises quality over evaluation based on bibliometric indicators (CNRS 2025a). Similarly, China's transition from article counts to patent production in academic advancement conditions can also be read as a sign that the system has begun to recognise its own limits (Puiu 2026). For this scenario, academic capitalism itself must transform; this is not an easy process, but neither is it impossible.

11.3. Dual Literature

On one side, an indexed, procedural, technical literature, and on the other, an interdisciplinary, thought-heavy, narrative-based literature may emerge. These two literatures already exist side by side today; the difference is that the distance between them will become more pronounced. On the first side will be texts that can also be produced by AI and fed into the system; on the second, texts that may receive fewer citations but are more widely read and genuinely meet with the public. This dual literature model

may allow two different writing regimes to coexist but also carries the risk of reinforcing the dual structure without questioning the hierarchy of academic value.

12. Conclusion

The formalisation of knowledge production is not a data deficit but a narrative contraction, and this contraction cannot be evaluated independently of political economy. Data production is increasing at an unprecedented rate in history, yet the interpretive framework is narrowing, discourse is homogenising, and authorship is becoming anonymous. The role of AI in this picture is to render visible the depth of an already existing crisis, rather than to create it.

The extremely profitable model sustained by major publishing monopolies systematically devalues academic and reviewer labour and condemns researchers to standard form. This compulsion functions as a structural force that grinds down scientific creativity. Viewed from Fleming's (2021) framework, the capitalist university seeks the means to most cheaply substitute the labour it has made ordinary; when scientific writing becomes sufficiently mechanised, its replacement by the machine becomes inevitable.

The future of scientific writing lies in questioning its own structural monism, not in resisting AI. It is as tragic as it is ludicrous to complain of "no human" in texts from which human creativity and human voice have been erased. What needs to change is the current schematic structure of the scientific writing regime, not the machines themselves.

Structural transformation begins with the publishing economy – recognising reviewers' labour, making publishers' profit models transparent, and genuinely democratising open access, of which CNRS's exit from Web of Science is one concrete sign. This economic shift cannot be separated from a restructuring of academic employment: precarity is the engine of standardisation, and without reducing it, no exhortation to write creatively will take hold. What both of these changes would clear space for is the third and most fundamental shift – the revaluation of non-paradigmatic, interdisciplinary, and narrative-based writing as the stratum of intellectual work that AI cannot readily substitute (Nathani et al. 2025).

None of these transformations is a technical reform. Each contains a fundamental political question regarding how academic knowledge is produced, who produces it, and for whose benefit it is produced. For this reason, the crisis of scientific writing must be addressed not as a scientific problem but along the axes of education policy, labour rights, and the public knowledge economy. The current pressure created by AI demands a long-deferred answer to these structural questions. The question of feasibility is real but must be understood as political rather than technical. The current trajectory is itself unsustainable: the retraction crisis, the collapse of peer review capacity, and the exponential growth of AI-assisted low-quality output are symptoms of a system that has already reached its internal limits. Scenario analyses of peer review in the AI era suggest that this collapse is not a transient disruption but a structural threshold

requiring deliberate institutional redesign (Munger et al. 2026). The question is not whether the system can continue unchanged, but which alternative trajectory is most likely under current institutional pressures. Several concrete moves are already underway: CNRS's exit from Web of Science, DORA's adoption by a growing number of research funders, and the expansion of open peer review all indicate that the dominant model is losing its grip. Structural reforms such as the abolition of publish-or-perish targets or the guaranteed extension of secure academic employment are not utopian demands but logical corollaries of the evidence. Without reducing the standardisation pressure generated by precarity, no amount of exhortation to write more creatively or resist AI will produce change.

What re-narrativisation looks like in practice is worth specifying. At the level of research assessment, it means recognising essay-form and theoretical writing in promotion and tenure criteria alongside indexed journal articles. At the level of journal policy, it means creating space for submissions that do not conform to IMRAD – as *tripleC* already does – and actively soliciting work that takes formal and intellectual risks. At the level of doctoral training, it means equipping early-career researchers with the capacity to write for multiple registers and publics, not only for journal editors and anonymous reviewers. And at the level of public knowledge, it means valuing and resourcing scholarly writing that speaks directly to non-specialist audiences without requiring a separate “translation” industry to mediate it. None of this requires abandoning rigour; it requires expanding the recognised forms that rigour can take.

In condensed form, the argument can be expressed as follows: the more scientific discourse becomes standardised and metrically governed, the more it becomes compatible with AI generation – and the more AI generation feeds back into and reinforces that standardisation.

The crisis of science is not a data crisis. It is a crisis of narrative capacity. Behind this contraction of discursive plurality lies a system that commodifies academic labour. Without a transformation of this system, neither can the relationship established with AI be placed on a healthy footing, nor can scientific writing recover its public meaning.

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