Beyond the Book

How Technology Is Shaping Education

Edited by

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Acknowledgments

I wish to express my genuine appreciation to each of the contributing authors for their academic dedication to this project. I am deeply grateful for the generous spirit with which they shared their experience and for their commitment to exploring the complexities of our technological age. This volume is a testament to their collective vision, and I am honored to have worked alongside such a distinguished group of scholars in rethinking the future of education.

Dedication

To my daughters: the light by which I see a world beyond algorithms. This work is for you, with the hope that the world you inherit remains as bright and wonder-filled as the love you give me every day.

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Introduction

Bridging the worlds of education and technology presents a compelling, crucial challenge. This is largely because the pace at which one and the other develop has significant discrepancies, requiring a temporal distance that will only permit proper evaluation and validation decades in the future. Nevertheless, some initial signs and clues are already available, allowing us to consider the real impact of the latest technologies on educational processes.

This book addresses that challenge: considering how education is being reconfigured by the advance of technology and how the latter imposes itself on education *lato sensu*. The digital transformation of contemporary society is an undeniable and inescapable reality. The algorithm is the new essence of the language models that permeate the different layers of human reality.

The rapid development of artificial intelligence is reshaping and breaking down boundaries. Reshaping the way we read, research, and write; breaking limits in all fields of human knowledge. In this sense, learning processes (inside or outside of school) are also compromised, that is, they are subject to the techno-digital invasion that is filling our days. This means, therefore, that on the one hand, artificial intelligence influences new pedagogical practices, new forms of research and creation, and on the other hand, it generates challenges that would have been unthinkable just a decade ago, such as clearly defining what intelligence is or, more fundamentally, what it means to be human. Naturally, as in all evolutionary processes, there are positive and negative aspects. No one can deny the importance of technology in human life today: from medical prediction to the use of GPS, from the streamlining of administrative processes to real-time communication, technology has earned its own space. However, we

are living in a different era, a very different era, a digital age with real dangers on the horizon, driven by this disconcerting acceleration of artificial intelligence.

Perhaps for this reason, or equally because of it, this book begins with a defence of the Humanities within the general landscape of education, as articulated by Luísa Antunes Paolinelli and José Eduardo Franco. This intention is based on the assumption that there is a human dimension in education that cannot be lost, or, more accurately, from which we must not deprive ourselves in the name of Hard sciences and technology.

In the second chapter, the author, acknowledging from the outset the impact that Artificial Intelligence is having on daily life (especially in the Western world), calls attention to two undeniable realities: one, the influence of Artificial Intelligence on education, specifically on learning processes, and two, a process that the author characterizes as the cyborgization of the human species. Two immediate consequences stand out from his reading: cognitive decline and memory loss. Without the full employment of these faculties, there can be no creativity, critical thinking, aesthetic judgment, or discernment of taste, among many other capacities, and this leads to the cyborgization of the human. Silvia Azevedo offers a differentiated perspective on the use of Artificial Intelligence (AI) in learning. She highlights the advantages of AI, viewing it as a transformative agent that redefines how knowledge is taught and accessed. Crucially, the author stresses the absolute necessity for this use to be accompanied by supervised mediation provided by educational agents (teachers, educators, etc.).

In the text, coordinated by Mauricio S. Neubern, the meaning of education acquires profound significance and goes beyond school learning. It highlights the frequent debate among educators, academics, and politicians regarding virtual influence. The constant presence of digital devices (such as cell phones, tablets, and laptops)

raises a series of issues, notably the problem of freedom, as virtual influence frequently appears to shape individuals' ways of thinking, decision-making, and behaviour. The article proposes a brief and exploratory reflection on the concept of "App Hypnosis", defined as the hypnotic influence fostered by applications (apps) present in standard digital devices. This chapter opens up a range of avenues and perspectives that will certainly warrant further attention in the near future.

In chapter five, Ana Bijoias Mendonça proposes connecting Environmental Education (EE) to the "lifeworld" and everyday life to foster complex relationships with nature and territorial realities. She highlights that technologies and AI can either be supportive instruments or alienating factors in this context. Ultimately, the study addresses the intersections of EE, citizenship, and sustainability within contemporary global and local challenges.

The text written by Carlos Lopes (chapter six) analyses the integration of Environmental Education (EE) and green economy principles in Administration and Secretariat curricula. The study identifies significant gaps between guidelines and pedagogical practices, arguing that meeting sustainability demands requires a systemic curriculum redesign featuring active, interdisciplinary learning. The findings underscore the urgent need for higher education reform to align professional training with the green transition and sustainable development goals.

In chapter seven, Patrícia Gouveia's text leads us to another pedagogical territory—that of arts, gaming, and gender-inclusive environments—broadening the general sense of education and citizenship. This interpretation is supported by the project's objectives - Xcare collective (supported by 15 international contributors), which utilize action-based research (using ludic ecologies) and explore themes like gender inclusion, sustainability, and democracy (core

tenets of citizenship), thereby expanding the pedagogical field through innovative methodologies like gaming and art.

Ana Branca Soeiro de Carvalho, analyses in her paper the impact of COVID-19-pandemic accelerated digital transformation on Portuguese higher education. Findings show increased psychological vulnerability and demotivation among students due to emotional fatigue and isolation from digital tools. The study recommends integrated investment in mental health services, ICT, and pedagogical innovation.

In her text, Nídia Menezes Abrunhosa leads us to what she considers to be a civilizational shift by analyzing the impact of Artificial Intelligence (AI) on education. According to the author, effective education for a changing world must be understood as a broad tool for citizenship, social justice, and inclusion, requiring pedagogical strategies that foster critical analysis and social participation beyond the limits of formal knowledge (Santos, 1997). This approach necessitates viewing technological tools as essential teaching methodologies, enabling autonomous, dynamic learning, and rational information use.

The chapter authored by Ana Guia, analyzes the AgroHub Project (Douro, Portugal - Valladolid, Spain) as a case study demonstrating how cross-border cooperation drives digital and territorial innovation for sustainable rural development. Through participatory methodologies and the creation of the open learning platform AgroHub MOOC, the project successfully integrates digitalization, local identity, and sustainability. Findings underscore that digital innovation and collective learning are key enablers of territorial resilience and inclusive agriculture in these rural border regions.

The final chapter, by Susana Fonseca, presents a comparative study on the impact of accelerated digitalization in higher education, triggered by the COVID-19 pandemic, on two programs at ESTGL-

IPV between 2018 and 2021: Secretariat and Administration (SA) and Computer Engineering and Telecommunications (EIT). The study concludes that developing digital competencies and strengthening institutional support policies are crucial for pedagogical sustainability and for mitigating performance asymmetries between different disciplinary areas.

We hope the reflections presented in this book can illuminate key emerging questions concerning education and technology, thus opening new avenues for interpretation and research on this urgent subject.

Paulo Alexandre e Castro

In Favour of the Humanities: The Human Dimension of Education

Luísa Antunes Paolinelli
José Eduardo Franco

In a society increasingly marked by economic and social demands, policies of specialization in technological and digital fields, and the valorization of scientific and technical fields, the traditional Humanities have been progressively abandoned, dictated by their secondary status, both in high school and university, in a utilitarian conception of knowledge. Reflecting on their place in education is crucial for thinking about the future, which does not neglect a comprehensive and humanized education, where the abandonment of culture means the loss of the human, in favor of fragmentation, negotiation policies based on exclusively economic values, and objectification.

The defense of the Humanities, which involves combating the old dichotomy between the Humanities and the so-called "scientific" or "hard" Sciences, is essential in building freedom of thought, in creating empathy and in empowering accountability, in the name of a fully human education that signifies a commitment to the global human being.

The ancient and persistent dispute between the exact sciences and the humanities is based on the belief that only the former has a legitimate relationship with the logic, analysis, and objectivity of phenomena. This perspective, still rooted in many contemporary discourses, tends to diminish the importance of humanistic disciplines—literature, philosophy, history, as well as cultural and global studies and other

disciplines that emerged in the 20th and 21th centuries – as equally rigorous modes of reading and interpreting reality. Indeed, more than a field of subjectivity, the humanities constitute a space for critical thought, symbolic mediation, and a profound understanding of human experience, without which science itself would lose its ethical and cultural dimension.

The educational project of the Lyceum and University to which we are heirs, developed in the Middle Ages, was born precisely based on the dialogue between disciplines and the demand for knowledge, guided by an ideology of seeking the unity of knowledge, while simultaneously ensuring its epistemological autonomy and its contribution to the construction of a more holistic understanding of the complexity of human beings, nature, and the cosmos. The disciplines that today fall under the scientific umbrella of "Humanities" have, since the historical genesis of pre-university and university education, played a central role in an education intended to liberate the human universe and, as far as possible, unify the stages of fragmented disciplinary knowledge production.

The humanities, together with science, constitute an essential foundation for understanding the human experience in its entirety. However, they tend to be undervalued—not only in academic curricula, but also in broader social perception. In the era of digitalization and the supremacy of applied and technological sciences, the prevailing conviction seems to be that only these have true utility, as they are associated with the dominant paradigm of innovation, understood primarily in technological and economical terms. Their relevance is measured by their ability to generate products, solutions, and immediate economic impacts, relegating the humanities to the realm of the accessory or the intangible. With the growing drift toward specialization in knowledge construction and the extreme valorisation of scientific and technical fields in the name of economic and social

demands, the traditional humanities have suffered a worrying relegation to secondary status within the educational framework, running the risk, in the case of academia and in what concerns the national research agencies, of their disappearance.

There is also the increasingly widespread idea that the humanities are far removed from the basic necessities of life, confined to the study of authors and works considered obsolete or, in the perception of many young people, uninteresting and "useless." This reductionist view ignores the essential role of the humanities in the formation of critical thinking and the construction of a conscious citizenry.

Martha Nussbaum, in *Not for Profit: Why Democracy Needs the Humanities* (2010), emphasizes precisely this point: the study of the humanities is crucial for the exercise of empathy, moral imagination, and ethical judgment—qualities indispensable to democratic vitality. By reducing the value of knowledge to its immediate profitability, we run the risk of producing generations who are highly technically competent but impoverished in the realm of critical thinking and human sensitivity.

The humanities, in this sense, are not a luxury of the spirit nor a remnant of an academic past, but an urgent necessity in a world that tends to measure everything in terms of productivity, time efficiency and profit. They remind us that knowledge serves not only to make machines work, but also to understand the meaning of making them work – and, above all, to discern the human, ethical, and social consequences of every innovation we celebrate. The strength of the humanities lies precisely in their symbolic and reflective space, essential to scientific development: within them, we consider language, ethics, imagination, and memory—dimensions without which innovation itself loses meaning. If technology transforms the world, the humanities help us interrogate it; if science builds instruments, the humanities construct meanings.

The relationship between the two should not be one of hierarchy, but of interdependence, for only the dialogue between technical knowledge and humanistic thought allows us to truly understand what it means to be human in a time increasingly mediated by machines.

It is also clear that updating the methods and epistemological identity of the human sciences must keep pace with the demands of knowledge production and dissemination in contemporary societies, increasingly pressured by technologies permeating all fields of human endeavor. In this context, Ernst Robert Curtius's warning about the "abandonment of culture" (1931) gains relevance. This metaphor, used by the scholar, portrays the emphasis on instruction to the detriment of the integral, global development of the individual, which currently translates into the replacement of reflection by acceleration, reading by unchecked information, and contemplation by the urgency of utility. Education for Curtius should be, above all, an investment in the personality, in its understanding of culture, science, and thought as dynamic traditions, in its ethical "I" and "we." In *European Literature and the Latin Middle Ages*, the author exemplifies precisely how knowledge should be understood, drawing attention to the study of thought and history that provides a "widening and clarification of consciousness." (Curtius, 1963).

From an effort to update, as a sign of renewal, emerge the so-called Digital Humanities, a field that seeks to respond to the new challenges of advanced knowledge production through the critical integration of technological tools into research and teaching methods. Far from constituting a surrender to technocratic logic, Digital Humanities asserts itself as a space for convergence between the humanist tradition and the potential of the digital: in them, text, images, and data collected through research coexist as complementary ways of interpreting the world.

By incorporating tools for computational analysis, data visualization, artificial intelligence, and digital preservation, Digital Humanities reconfigure the way cultural heritage is studied and communicated. More than a simple adaptation to technical demands, it reaffirms the value of the humanities at the centre of the contemporary debate on knowledge, demonstrating that humanism can reinvent itself without relinquishing its essential calling—to understand the human in the complexity of its expressions, now also mediated by the digital.

By placing the word at the centre of their concern, the Humanities are also fundamental to the construction of society. In fact, the use of the word is a true weapon, the most powerful that humanity can wield. But knowing how to use it means understanding its ethical value and responsibility in conveying just and, above all, true ideas. As Daniela Marcheschi writes, to disconnect the word from ethics, in a formalist and aestheticizing drift, is to empty it of responsibility, betray the "truth of the world," and create a void of meaning:

> Pilate's cynicism (or its vileness) and convenience, as a man of government, are disguised, cloaked in the intellectual finesse of a statement that, to truly understand beauty, would have required maximum tension with the substance of truth itself.
>
> It is well known, unfortunately, how often Western culture has fed on empty "shells," forgetting that words exist independently of us, yet they interact with us and judge us. Precisely because of their origins and history, words can emit an exceptional power, which derives from their ability to express substantial realities and ideas of irreplaceable values for the construction of a new culture. (Marcheschi: 2004, 44)

Authentic knowledge is, ultimately, the fruit of an education "of the word" and "for the word." It is in the word that thought is formed, communicated, and transformed into shared knowledge—and it

is also therein lies the difference, so dear to Ernst Robert Curtius, between mere instruction and true formation. Instruction transmits data and techniques; formation, however, cultivates the use of words as a critical spirit, sensitivity, and ethical awareness, which makes knowledge an exercise in freedom.

The expression attributed to Cato, "Vir bonus dicendi peritus" (literally "a man of worth and ability to speak"), summarizes the two most important qualities of the ideal orator: prioritizing moral qualities ("bonus") over technical competence ("peritus").

The man of worth is the expert in words, as opposed to one who uses them merely as an instrument of rhetoric or manipulation, propagating pseudo-truths. Words, when emptied of their meaning, become noise; when educated, they become a place of encounter and discernment. It is in this space that the humanities find their raison d'être – not only in the study of texts or works, but in the preservation of language as an instrument of truth, dialogue, and civilization, humanized and humanist. Thus, the defense of the humanities is not a nostalgic gesture, but an ethical and cultural imperative, nurturing the capacity to speak about the world with lucidity and responsibility.

The vocabulary impoverishment observed in recent years leads to a worrying confusion between knowledge and the transmission of convictions, many of which are nothing more than pseudo-truths. The problem lies not solely in the world of digitalization and AI itself, but in the use of words stripped of the "bonus" – that is, the ethical, critical, and historical awareness that confers them authenticity. When words are reduced to a vehicle for opinion, they lose their formative power and become a mere instrument of persuasion.

On the other hand, those who allow themselves to be "convinced" by such discourses often reveal a weakness in their linguistic, historical, philosophical, and artistic skills – precisely those that the humanities

aim to cultivate. This fragility is not merely individual: it reflects an educational context that tends to reproduce inequalities. Access to speech – in its full, critical, and creative sense – risks becoming the privilege of the ruling classes, while a large portion of citizens find themselves confined to interacting with the world through a limited vocabulary, and therefore, having a reduced capacity to think and intervene in it. When mastery of language becomes a marker of social distinction, democracy itself is impoverished. Speech ceases to be a common space for understanding and debate and becomes a territory of symbolic exclusion. It is, therefore, important to recover the value of language – to educate it, to reflect on it, to restore its historical and ethical density.

The humanities – and the very humanism that emerges from them— are also the privileged space for relating to the other, for recognizing otherness, and for approaching others. They underlie the idea of a global and universal human being, capable of understanding himself only to the extent that he understands others. In the words of Martha Nussbaum:

> Citizens cannot relate well to the complex world around them by factual knowledge and logic alone. The third ability of the citizen, closely related to the first two, is what we can call the narrative imagination. This means the ability to think what it might be like to be in the shoes of a person different from oneself, to be an intelligent reader of that person's story, and to understand the emotions and wishes and desires that someone so placed might have. (Nussbaum: 2010, 95)

It's not just about formal instruction, but about a continuous exercise in broadening perspectives, opening up to diversity, and overcoming the limits of one's own perspective. The truly global person refuses to be merely a good geographer; they know that geography is also a human construction, made of stories, memories, and symbolic

boundaries. Likewise, they recognize that mathematics, physics, and technology share a common denominator: the human dimension that originates and gives them meaning. It is at this point of convergence that humanism reveals its strength—reminding us that all knowledge, no matter how technical or abstract, is always a form of relationship with the world and with others.

In contrast, the scientific logics of the exact sciences and the humanities are, ultimately, mutually enriching. Both seek to understand reality, albeit through different paths: one through measurement and quantification, the other through interpretation and sensory experience. The humanities also resort to observation, experimentation, and the deductive method. They explore doubt and error as paths of discovery, while also analyzing emotions, values, cultures, and social interactions. They also investigate human motivations, social dynamics and representations, reflect on ethical challenges, and interrogate the temporal and spatial landscape of existence.

In this process, the humanities mobilize instruments that escape mere rationality: imagination, the "lightness" Italo Calvino[1] spoke of, memory as a basis for information for the future. It is these dimensions – the poetic, the symbolic, the ethical – that complete the scientific perspective and restore its depth.

The integration of the exact sciences and the human sciences thus leads to a broader and more multifaceted understanding of the world: a science that considers the human and a humanism that recognizes the power of reason. It is at this intersection that the true advancement of knowledge is outlined – that which unites precision and meaning, calculation and compassion, technique and conscience. The challenge of the ancients is clear: Homer deals with history and universal

[1] *Cf.* Italo Calvino, *Six Memos for the New Millenium* (Harvard University Press: 1988).

themes; Cicero analyzes the crisis of political power and emotions; Aristotle reflects on poetics and describes the natural world, etc.

The extreme specialization that the end of XX century and the XXI century education has prioritized is dictated by the link between education and profession, considered essential for students' insertion into the world of work, considering them not as students in development but as future workers. Education should not be utilitarian, but rather develop responsible citizens. Thus, it cannot be limited to preparing for productivity: it must educate for humanity. Perhaps this is the essential condition for mitigating the most severe consequences of technological development – a future in which many professions will disappear and work will likely cease to be central to human life.

How will humans adapt to an environment dominated by autonomous devices, endowed with decision-making capabilities potentially superior to those of humans? What conflicts will arise at the root of this new social structure, in which the distinction between creator and creature will become increasingly blurred? Artificial intelligence is not limited to solving complex tasks efficiently; it is poised to replace both manual and intellectual labour, thus challenging the very centrality of humankind as a subject of knowledge. The boundary between the human and the technological becomes porous, and the language we use to describe these machines betrays this ambiguity: we speak of "behaviour," attributing to them attitudes, intentions, and even decision-making capacity.

This semantic shift is not innocent—it reveals the tendency to anthropomorphize the machine and, simultaneously, dehumanize humans, reducing them to a set of quantifiable cognitive processes. If artificial intelligence learns, decides, and creates, what room will remain for human experience, for error, for uncertainty, for the gratuitous gesture that seeks not efficiency but meaning?

When automation replaces most productive functions, humanity will be left with what no machine can replicate: the ability to think, imagine, create, and feel. Thus, the humanities assume a decisive role not only in preserving cultural legacy but in redefining the very meaning of education. They remind us that knowledge should not be measured by its immediate utility, but by its capacity to give meaning to existence, to shape consciousness, and to inspire freedom.

At the Pew Research Center in 2020, nearly 1,000 participants were asked to imagine what it would be like to live in the year 2030[2]. While most expressed optimism, some concerns emerged: the loss of control over one's own life; the intentions behind the development of AI, who would profit, and the objectives of this investment; the control of AI as an exercise of power and authoritarianism; if AI were in the wrong hands, it could eventually become a vehicle for the dissemination of prejudice and ideological manipulation through algorithms; "psychopathic" dependence on machines; the loss of jobs and a consequent difficult economic and social transition; cognitive dependence as the only compass to guide us in the world; and the rise of cybercrime (*Cf*. Castro, 2024).

Participants were also asked to formulate strategies to address the challenges posed by artificial intelligence and the increasing automation of life. Among the most frequently cited solutions are the strengthening of humanism, international collaboration, and the improvement of educational systems, in order to prepare individuals for a new vanguard of knowledge and global coexistence.

The school of the future cannot fail to teach the fundamentals and principles of artificial intelligence—it would be irresponsible to ignore the technological language that shapes the world. But, at the

[2] https://www.pewresearch.org/internet/2020/06/30/innovations-these-experts-predict-by-2030/

same time, it cannot reduce knowledge to these instruments, under penalty of nullifying the very meaning of knowledge. If education is limited to operability and efficiency, it runs the risk of producing technicians without thought, users without conscience, and citizens without discernment.

There is, furthermore, a far-reaching political and ethical risk: if those who control AI – technological corporations or state – decide not to democratize its access or share its operating principles, we could witness the emergence of a new form of cognitive inequality. A portion of the population could be deprived of the skills necessary to understand and fully participate in the digital society, becoming dependent on decisions and systems they do not master. The humanities (disciplines such as anthropology, philosophy, and history) can play a fundamental role here, as they raise questions that involve the "how," the "how much," and the "who": how can technology serve humanity? How much will humanity change? Who will control technology? These reflections are essential because we are in a period of historical renewal, but it is necessary to know and understand history.

It is human and spiritual actions that give technology its power, but there can be, in the words of R. Guardini in his book *Ansia per l'Uomo* (2024), an "existential overload." Concern about the new era was also expressed by Cardinal Pietro Parolin at the International Conference "Generative Artificial Intelligence":

> [...] we are not only facing an era of change, but a true epochal shift. What is undergoing a profound transformation is the way in which man understands himself, in interpreting the present and imagining the future, generating a narrative of his being cast into the world that advances the claim of a

> discontinuity with the grammar of life inherited from the humanist tradition.[3]

Compared to the great technological innovations of the past, Parolin believes that the "algorithmic revolution" seems to require a radical paradigm shift, given that new technologies process an immaterial reality: information. Because they intervene in the production, storage, and management of knowledge, they can significantly impact how human intelligence develops. By externalizing cognitive functions, he explains, such as memory, and expanding mental capacities, they blur the line between nature and culture, giving rise to a truly "digital environment." Coping with change requires an investment in humanistic knowledge and ensuring that technology remains at the service of humanity, and not the other way around.

However, the crisis we are experiencing in education corresponds to the crisis of the humanities. As Martha Nussbaum wrote:

> We are in the midst of a crisis of massive proportions and grave global significance. No, I do not mean the global economic crisis [...]. [...] I mean a crisis that goes largely unnoticed, like a cancer; a crisis that is likely to be, in the long run, far more damaging to the future of democratic self-government: a world-wide crisis in education. (Nussbaum: 2010, 2).

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[3] In the original: «[...] ci confrontiamo non soltanto con un'epoca di cambiamenti, ma con vero e proprio cambiamento d'epoca. A subire una profonda modificazione è il modo in cui l'uomo comprende se stesso, nel leggere il presente e immaginare il futuro, generando una narrazione del suo essere gettato nel mondo che avanza la pretesa di una discontinuità con la grammatica della vita ereditata dalla tradizione umanistica». Parolin, 2024, "Intelligenza Artificiale Generativa": available at: https://www.centesimusannus.org/wp-content/uploads/2024/07/Discorso-S.E.R.-Card.parolin_Conferenza_centesimus_annus_intelligenza_artificiale_giugno_2024.pdf

Of the conferences presented at The World Conference on Higher Education in the Twenty-First Century, organized by UNESCO in 1998, Rosário Couto Costa highlights, among others, that of Michael Gibbons, counsellor to the World Bank, entitled "Higher Education Relevance in the 21st Century", in which the speaker

> affirms the urgency of a new paradigm for the University, and theorizes such a transformation. The main mission of the University would be to serve the economy, specifically through the training of human resources, as well as the production of knowledge, for that purpose. Other functions would be cast into the background." (Costa: 2019, 2).

A sort of "new public management" or "new managerialism". Essentially, a policy of devaluing the humanities was institutionalized, valuing skills and knowledge linked to other fields, such as economics and technology.

Rosário Couto Costa draws attention to the symptoms of this trend: the decline in student enrolment and the lack of financial resources for teaching and research.

> One of the symptoms relating to such a social phenomenon has been a progressively lower relative representation of graduates in humanities and, in some countries, also of the absolute representation, especially with regards to doctorate degrees. For instance, in the period between 2000 and 2012, while the number of humanities graduates rose by a factor of 1.4 – and that of total graduates by a factor of 1.6 overall – those in the area of business administration increased by a factor of 1.8. For perspective, this accounts for virtually a fifth of total graduates. In other words, although academia within the humanities is growing, it is doing so at a disproportionately

> lower pace than when compared with other fields. (Costa: 2019, 2-3).

In recent years, the number of humanities faculty has also been steadily declining in both Western and Eastern countries, while there has been marked growth in the fields of engineering, economics, and sciences applied to innovation. In virtually all Western countries, humanities professors and researchers face significant cuts and a visible institutional devaluation. Among the most affected areas are history, philosophy, literature, classics, philology, and linguistics – pillars of an intellectual tradition that, paradoxically, underpinned the development of modern science itself.

The only areas that still show a slightly positive balance, albeit with reduced growth, are pedagogy and psychology, often because they are closer to the applied social sciences and because they respond to practical needs of the educational system and public policy. Interestingly, employability data belies the widespread perception that the humanities are "useless" or "unproductive." The difference between the employment rate of graduates in the Humanities and those in the Exact Sciences is, in most countries, minimal. What we are observing, in fact, is a reconfiguration of the Humanities: a significant increase in the so-called Applied Humanities, which combine humanistic thought with cultural management, communication, public policy, technological mediation, and data analysis.

This phenomenon reveals not the extinction of the Humanities, but their transformation – with new areas gaining ground: Language and Translation, Language and Political Science, Digital Humanities, Literature and Tourism, Literature and Journalism, Literature and Therapies, etc. The skills of the humanities – the ability to interpret, argue, communicate, and understand complex contexts – remain indispensable, even though they are now expressed in new domains, where humanism is combined with innovation.

In this process of reconfiguration, language and literature risk becoming mere instrumental vehicles of communication, losing the symbolic and cultural density that characterizes them. Cultural, historical, and aesthetic aspects—once considered essential to understanding the spirit of an era and the complexity of human experience—become seen as secondary, incidental to the urgency of utility.

Language, reduced to a tool of transmission, ceases to be understood as a form of thought and an expression of a worldview, just as literature risks being converted into a functional or decorative object, deprived of its critical and revelatory power. By stripping the text of its aesthetic, historical, and cultural value, we also lose the capacity to imagine, to doubt, to recognize the plurality of voices and narratives that make up the human being.

This trend reflects a deeper shift: the shift from a culture of education to a culture of performance, in which knowledge is evaluated by its output rather than the inner transformation it provokes. Recovering language and literature as spaces of creation, memory, and symbolic resistance is, therefore, an urgent task.

There is yet another issue linked to the challenges faced by the Humanities that the "World Humanities Report" of 2024 (Guyer: 2024), directed by Sara Guyer, from the University of Berkeley, identifies and of which the author talks about in an interview with Sarah Fullerton: «[...] today, the humanities are threatened for the very reasons they are powerful. They challenge conventional narratives and offer alternative — or what some have called more accurate — histories and imaginaries» (Fullerton: 2024).

In the report, Sara Guyer draws attention to the division between the Humanities understood as a "resource of critical analysis and interpretation," as "core practices of national identity formation, imperialism, and dominance," and the Humanities understood as

"critical global humanities: resources through which nationalism, imperialism, and dominance have been questioned, analyzed, dissected, and displaced" (Guyer, 2024, 21). But «critical humanities threaten a purist concept of national identity, whether by looking outward to question the assumptions of national projects or by looking inward to identify repressions of indigenous or minority knowledges. (Guyer, 2024, 21).

This situation, as he explains, can lead to tensions between academia and "other" institutions, since, as spaces for research, criticism, and the search for truth, they can suffer from a lack of funding, be "nationalized," and become sites of various forms of repression. Indeed, the lack of investment in research in the humanities is not only an economic problem, but a sign of a civilizational crisis: it reveals the growing difficulty of sustaining spaces for free thought in a world dominated by the logic of profit and productivity. In some contexts, this precariousness can degenerate into subtle forms of "nationalization" or political instrumentalization of academia, in which knowledge is shaped by ideological narratives and spaces for dissent are silenced. This is when the university ceases to be a place of inquiry and plural debate and becomes an apparatus for legitimizing dominant discourses. Various contemporary thinkers have long warned of this situation: the danger lies not only in the loss of resources, but in the erosion of intellectual freedom. And without intellectual freedom, there is no science, no humanism—only conditioned information and submissive knowledge.

It is an identity shift that is underway, with the consequent possible abandonment of culture, historical perspective, the past as an interpretation of the present, the references of thought, and critical thinking. What makes us human is precisely the ability to choose, to shape our individual and collective existence through the decisions we make. We are not merely beings subordinated to the physical laws

that govern the micro and macrocosm, nor mere organisms seeking to survive in a biological system. To be human is to be aware of one's own humanity, to recognize oneself as a subject and not merely an element of a natural or technological mechanism.

The specificity of the human being lies in their ability to represent, to imagine what does not yet exist, to create possible worlds through language, art, memory, and doubt. It is in the tension between what is and what could be that true knowledge is generated. Therefore, the Humanities are not a luxury of the spirit, but the space where man thinks about his own condition, where reason and sensitivity meet to give shape to meaning.

In an environment where Artificial Intelligence becomes a constant presence and a collaborator in everyday tasks, humans might be led to believe that investment in humanistic knowledge is dispensable, an anachronistic effort given the effectiveness of machines. But the opposite is true: the more technology advances, the more urgent education in critical thinking, language, ethics, and imagination becomes.

It is also important to highlight the contribution that the humanities are currently making to the reflection and understanding of AI's impact on humanity—from a historical, cultural, and ethical standpoint, involving philosophy, history and literature, global and cultural studies, linguistics, and social sciences. John Qiong Wang, Guorui Liu, and Yuting Lei published a study in 2025 that examines the consequences of diminishing classical cultural education and which demonstrates how this created a deficient solid humanistic foundation[4]. The authors argue that it is necessary to reinvest in human-centered discursive authority and restore the depth of traditional humanities

[4] Cf. J.Q.Wang, G. Liu & Y. Lei, "Reaffirming the importance of traditional humanities in the era of AI-enhanced translation and transcultural communication" In *International Communication of Chinese Culture*, 12, (2025). 277–31. https://doi.org/10.1007/s40636-025-00334-1

to navigate the unique complexities of AI-enhanced communication technologies, ensuring that AI advancements enhance rather than erode humanistic values and traditions. If well integrated, the authors argue, AI technology can contribute to global humanism by enriching transcultural communication worldwide. Thus, preserving and strengthening the Humanities is not a nostalgic gesture or a romantic attachment to the past, but a vital necessity for the future.

Perhaps the great challenge of the 21st century is not just developing new technologies, but preserving the human within development. And this challenge begins in schools, in universities, in the words and gestures that shape citizens aware of their history and responsible for their future. If science allows us to dominate the world, it is the Humanities that teach us to inhabit it – with intelligence, empathy, and a sense of humanity.

References

Calvino, Italo (1988). *Six Memos for the New Millenium*. Harvard University Press.

Castro, Paulo Alexandre e (2024). "What Neurohacking Can Tell Us About the Mind: Cybercrime, Mind Upload and the Artificial Extended Mind", In Castro, Paulo Alexandre e (Ed.), *Challenges of the Technological Mind. Between philosophy and technology*. London: Palgrave MacMillan/Springer, pp. 43-62.

Costa, Rosário Couto, "The place of the humanities in today's knowledge society". In *Palgrave Communications*, 5, 38 (2019), 2. https://doi.org/10.1057/s41599-019-0245-6

Curtius, Ernst Robert ‚Abandon de la culture". In *La Nouvelle Revue Française*, 219, 1931, 849-867 (Original: « Abbau der Bildung ». Die Neue Rundschau, XLII, 339-353).

Curtius, Ernst Robert (1963). *European Literature and the Latin Middle Ages*. Harper & Row.

Fullerton, Sarah (2024). "World Humanities Report Warns of Extinction Risk to Human Knowledge" in *UC Berkeley Research*. https://vcresearch.berkeley.edu/news/world-humanities-report-warns-extinction-risk-human-knowledge.

Guyer, Sara (2014). Director's Report: Strategies for Persistence in a World under Duress. World Humanities Report (CHCI). https://worldhumanitiesreport.org/wp-content/uploads/2024/10/WHR-DirectorsReport.pdf

Marcheschi, Daniela (2004). Prismas e Poliedros: Escritos de Crítica e Antropologia das Artes. Funchal: Atlântida Editores.

Martha Nussbaum, Not for Profit: Why Democracy Needs the Humanities (Princeton University Press, 2010), 95.

Cardeal Pietro Parolin, "Intelligenza Artificiale Generativa": available at: https://www.centesimusannus.org/wp-content/uploads/2024/07/Discorso-S.E.R.-Card.-Parolin_Conferenza_centesimus_annus_intelligenza_artificiale_giugno_2024.pdf