VisionnAIres

From education to healthcare, from business to research: Artificial Intelligence is reshaping the world. Views on the opportunities and challenges and how to turn the future into reality.

This is a text extract from the magazine sarfatti25 issue 1, 2025

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We are all…visionnAIres by Francesco Billari, Rector

Text:

Third in Europe and ninth in the world - this is the ranking of Italian scientific research in the field of Artificial Intelligence, according to a study by the scientific publisher Elsevier. A strong positioning, yet one that is not confirmed if we move to the field of AI adoption within companies: in fact, Eurostat ranks Italy 20th among the 27 European countries in this regard.

AI is a challenge that will involve us all - as citizens and professionals, as researchers and students, as businesses and institutions, and as a nation. A challenge increasingly centered on research and the ethical and responsible adoption of AI. Bocconi has embraced this challenge for years, engaging both as a research institution and as a university committed to preparing 'future-proof' students. It is a challenge that drives us to invest in increasingly multidisciplinary research and in educational programs at all levels, from bachelor's degrees to executive courses, applied across various fields, from marketing to healthcare. And starting from the next academic year, in collaboration with Humanitas University, we will launch the Master of Science in Data Analytics and Artificial Intelligence in Health Sciences.

But beyond advancing research frontiers and training future professionals and policymakers in this field, we must foster a widespread culture and awareness of AI and its potential to help us improve society. VisionnAIres, Bocconi's new initiative, which we feature on this issue's cover, is a project that, building on the expertise and studies of our researchers, invites everyone to explore the present and future of Artificial Intelligence. It encourages reflection on our stance toward this technology, which will play an ever-growing role in our lives.

View point

A lesson in the library by Paolo Tonato

Bocconi University opens its archives and literary treasures to schools and visitors, allowing even the youngest to experience the beauty of books. Among the highlights is the opportunity to browse the first complete Italian edition of Encyclopédie by Diderot and d'Alembert, published between 1758 and 1776.

Changed by women

The Bocconi project promoting women's empowerment and building bridges between generations of women will return on March 6with an event that will bring together the 199 alumnae ambassadors who are changing the world.

A legacy of empowerment and inspiration by Davide Ripamonti

Antonella Carù, Dean for Development and Alumni Relations, reflects on the evolving role of women, the importance of mentoring, and the need to keep the conversation on gender equality alive. "Because there is no stereotype of a female career," she explains, "and no goal is out of reach".

Text:

Women who are changing the world – each in their own profession, one step at a time, in different eras and contexts, breaking down barriers and overcoming stereotypes. They are all characterized by the determination to always move forward and the ambition to leave a testimony to the new generations. And they all, of course, have a degree or a Master from Bocconi University. These role models are involved in Changed by Women, a project Bocconi University launched on 8 March of last year to inspire the new generations of female students – but also to support them thanks to a fundraiser for scholarships – which are increasingly represented in the university's classrooms. 199 women, who will be celebrated on March 6, 199 very different stories that have success as another common denominator. "This project is very important," explains Antonella Carù, Dean for Development and Alumni Relations and Full Professor at Bocconi's Department of Marketing, "not only because it provides role models from which women students can be inspired, but also because these models, these women, are all different from each other. And so the positive message passes that there is no stereotype of a female-oriented career and there are no contexts where it is easier to emerge. Women must be aware that no goal is out of bounds, thanks to their preparation but also to the ability to interact with other people."

One career, many careers, one might say. And all equally stimulating and exemplary, not necessarily only those of those who reach top positions.

There are still relatively few women who hold top positions in large multinational firms, for example, because we are in a transition phase. If the CbW project had been limited to them, it would have meant talking about a still small number of people and careers that are not easily replicable. These are indeed important examples, but just as important, if not more so, are those examples of early and promising careers that are easier to replicate, also because the women are closer – including in age – to the students that the project aims to inspire. And they narrate opportunities that can be experienced. Another fundamental component of Changed by Women is the female mentoring program, because for young women it is important to understand their careers, but also to have direct contact with the protagonists and understand from them how the relationship with the family has been managed, how decisions in work and professions have been faced.   You were one of the very first women professors to become a Full Professor at Bocconi. Are you therefore also a role model? I had never seen myself in this role, it was not something I had ever thought about. But it's true, I happened to hear some students say that, for them, we represent examples of those who have made it. I strongly believe in self-evidence, in setting an example.   You have seen several generations of female students over the course of your career. How have they changed? There are some aspects that are somewhat contradictory. On the one hand, young women have acquired greater awareness of themselves, of their role, of the possibility of succeeding in many fields. On the other

hand, however, I continue to notice a sort of fear of their abilities, they must be perfectly prepared otherwise they are afraid of not succeeding. They are strong, they are confident but it is as if, perhaps in a hidden way, the fear of not being up to the task has remained in them. Where young women have changed a lot, in my opinion, is in the way they present themselves in job interviews: they present their desires, their goals with determination. It is also a bit the result of the work in the classroom, of the testimonies we bring, of the stories of those who have lived certain experiences before them, especially in traditionally hostile contexts.

Examples can sometimes be high level, others are easier to aspire to. Who are the women who, on a personal and professional level, have inspired and provided positive models for you personally?
The first person was definitely my mother. She was a high school graduate, not a college graduate, and worked outside the home with my father while taking care of the family. She has always supported me and encouraged me to follow my own path. She was a strong and calm woman, who always put a great deal of effort into her activities, happy with what she did, and represented a constant point of reference for me. Another woman I want to mention is my colleague and friend Francesca Golfetto, with whom I shared years of work in the same Department. She was a real example for me. If I think of more distant figures, I appreciated Emma Bonino for her battles for civil rights and pro-European spirit, and I have great admiration for Tina Anselmi and for what she has done, among other things, for women's rights.

Changed by Women is an important initiative for the Bocconi community because it brings together, unites, generations of women who have studied at the same University, and are continuously learning. In your opinion, will there be a need for a new edition in 50 years?
I would like to say no, that there will no longer be a need, because the messages we are giving with these editions will be disseminated and metabolized. But I'm not so sure. In many countries we have seen evolutions in the role of women that seemed to be positive changes with no going back, but then it was not so. Many things are changing in the world of work and women are more aware, but we must keep the discussion on these issues alive, so that there is no regression. I believe that moments of open discussion, sharing of experiences and solidarity will actually be increasingly necessary. Changed by Women will therefore be transformed, but will remain a model of inspiration for the future as well.

Bridging the gender gap by Paola Profeta

Women are reaching higher levels of education, advancing in positions of power, but the labor market remains unbalanced and there is still a long road to equality. Europe is making progress as Artificial Intelligence and new global scenarios reshape challenges. With policies, numbers and strategies, change is under way, but the question remains: is it enough?

Text:

Gender gaps are still dominant in our economies. From educational attainment to labor market participation, wages and careers, these gaps emerge early in life and persist across the lifecycle. Although significant progress has been made in the last decades, the pace of change has been slow and gender gaps remain substantial. According to the World Economic Forum, it will take more than 130 years to close gender gaps across the world. In Europe, the Gender Equality Index published by the European Institute for Gender Equality (EIGE) provides a clear measure of progress. As of 2024, Europe achieved a score of 71 out of 100, indicating progress but still falling short of full equality. Significant disparities persist across countries, emphasizing the need for policies that consider the specific socioeconomic and cultural contexts of each country.

The final score depends on several components. Women in the EU surpass men in educational attainment, with higher rates of university graduation across all Member States. However, women remain underrepresented in STEM (science, technology, engineering, and mathematics) fields, limiting their participation in some of the most important and rewarding sectors of current and future economies

The domain of power has seen the most significant improvement in recent years. Women's representation in decision-making positions, both in politics and business, has increased markedly. In 2024, women made up 33% of members in national parliaments across the EU, a stable figure compared to 2023 but up by 10 percentage points since 2010. Progress in corporate leadership has also been substantial, with women now holding 34% of board seats in the largest publicly listed companies, up from 28% in 2019. This improvement is largely attributed to the implementation of board gender quotas. In Italy, one of the first EU countries to implement board gender quotas, the share of women on boards of listed companies has now exceeded 40%.

The labor market remains the most challenging area for achieving gender equality. While women's employment in the EU has increased, a significant employment gap persists, standing at 15 percentage points on average. Italy shows the worst indicator: only 51% of women are employed. This stagnation highlights the need for stronger and systemic policies.

The unequal distribution of caregiving responsibilities remains a significant barrier to gender equality in both professional and personal spheres. According to EIGE, 34% of women in the EU provide daily care for children, elderly family members or individuals with disabilities, compared to 25% of men. The gender gap widens considerably among couples with children, where 65% of women and 46% of men are primary caregivers. Gender gaps are deeply rooted in historical and cultural contexts, making them difficult to address. However, policies may play an important role. For example, board gender quotas have not only increased women's representation in leadership roles but also improved board qualifications without negatively impacting performance. Policy interventions addressing structural inequalities and entrenched cultural norms are essential for accelerating progress. A comprehensive approach is needed, including daycare centers, paternity leave, jobs with flexible arrangements, worklife balance initiatives, inclusive leadership, training programs and initiatives to reduce biases within firms.

The landscape of gender equality is becoming increasingly complex, particularly in the age of artificial intelligence (AI). While AI offers new opportunities for both men and women, it also presents new challenges. Concerns persist regarding the demand for new skills – skills that women may disproportionately lack – and the shifting economic landscape, which could create additional barriers to women's progress. To advance gender equality, it is essential to understand the root causes and consequences of gender gaps and how they evolve in the face of technological change.

The global progress on diversity, equity and inclusion (DEI) faces additional challenges in the face of a more conservative political climate. In the United States, major corporations such as Amazon and Meta have scaled back their DEI programs. These companies argue that true inclusion can be achieved without "giving preferential treatment to certain groups". This rollback, especially following Trump's re-election, signals a significant shift in corporate attitudes toward DEI initiatives.

In Europe, the approach to DEI has historically been less polarized, with "woke culture" playing a less dominant role. Discussions surrounding DEI policies remain active, with gender equality taking a central stage. EU institutions continue to play a pivotal role in advancing equality through directives on sustainability and gender quotas in corporate governance. These efforts demonstrate the EU's commitment to fostering a more equitable society across Member States.

In this complex and rapidly evolving context, role models are increasingly recognized as a powerful and uncontroversial tool to address gender inequality. By showcasing successful women in diverse fields, role models challenge cultural stereotypes and inspire future generations. Combined with effective policies, such as those promoting education in STEM and supporting work-life balance, role models can be a powerful driver for change, ensuring that progress toward gender equality is both sustained and accelerated.

Box:The project
We began by collecting the stories of 99 Alumnae in a book and we transformed them into Changed by Women: a multiplatform project that strives to empower women both by sharing their testimonials and by launching the Women Fund to support future female students.

Box: The women fund
The 2025 edition of Changed by Women will celebrate the journey we have taken together and the positive impact generated, also through the Women Fund, the fundraising project that supports the Bocconi female students of tomorrow.

Maria is now the face of Italian Young Entrepreneurs by Diana Cavalcoli

President of Confindustria Giovani, the Italian young industrialists' association, since last November, the alumna Maria Anghileri retraces the steps that led her from graduating in Law and passing the bar exam, to becoming COO in the family company, Eusider. "Getting elected president was tough, but I'm happy that a woman has been chosen because I believe in leading by example," she says.

Text:

"I can't say I've had a linear career path. I didn't find my way straight away after graduation and that was a good thing because this gave me time to experiment. Working as a lawyer outside the family business, for example, was an incredible formative experience." Born in Lecco in 1987, Maria Anghileri is now the chief operating officer of the Eusider Group, one of the most important players in the Italian steel market, and has been leading Confindustria Giovani Imprenditori, the young segment of the Italian industrialists' association, as President since last November.

"After graduating from the Manzoni high school in Lecco, I chose Law at Bocconi both for my love of studying and because the legal profession opens many doors. At the time, I didn't think of joining the business built by my father and uncle, unlike my brother who had a clear path ahead of him". Years of university life and poring over books and codes of law led her to pass, after graduating in 2011, even the dreaded state exam for professional qualification as practicing attorney. She says: "It was an intense period, a lot of personal commitment, but I remember it with pleasure and I have never regretted the choice. I then worked for three and a half years in a law firm in Milan, improving my skills as a lawyer. I liked the profession but I felt I wanted to broaden my horizons. So I decided to join Eusider, initially dealing with legal aspects and human resources". Thus she got to know the family company from inside, which specializes in the transformation and processing of steel in all its forms. To complete her training and specialize in economics and finance, Anghileri flew abroad, first to Columbia University and then to Harvard Business School in the Owner President Management program.

"It was an incredible experience," she explains, "also because I had the opportunity to be in the same class with young and passionate entrepreneurs from all over the world. Above all, you weree called to interact much more than in Italy during class hours. You learnt to expose yourself firsthand, not just listen. You leave the campus with the feeling of being able to change the world."

A taste of the American dream that also helps her advance within Confindustria, where she has been active since 2015. "I must also say that it was thanks to my brother who immediately believed in my abilities and thought I was suited to this type of path, which I pursued in parallel with my managerial role at Eusider." In 2017, she was elected to the Presidency Council of Confindustria Lecco Sondrio, with responsibility for the Elite project, and in 2018-2019 she became vice president of the Young Entrepreneurs Group of Assolombarda and Confindustria Lombardia. And then the climb to the top: elected President last November with over 95% of the votes, she will be voice of Italian young industrialists for the 2024-2028 four-year period.

"The election campaign was challenging but I am happy to have done it and that the movement of young entrepreneurs has chosen a woman president, also because I believe in leading by example. I think it is positive that the number of women in the rooms where decisions are made is growing, which is also why in my team of vice presidents I wanted there to be full equality between men and women", she adds. To those young women who are studying now and are building a future for themselves, she advises "to never stop". And

she underlines: "I am convinced that the paths we take in life always teach us something and the skills we have learned along the way can always be useful".

Box: The event
Changed by Women invites you to join us on March 6, 2025, for a major event hosted by Claudia de Lillo (Elasti) and featuring the extraordinary participation of Donna Javotte, portrayed by actress Gledis Cinque. Discover all the evening's special guests and register now!

Box: The course
The SDA Bocconi course "Diversity, Equity, and Inclusion in Business" analyzes governance, leadership, and human resource management practices that effectively enhance diversity in organizations.

A podcast to inspire new generations of women

The Changed by Women project has also taken the form of a podcast: Presenti e future – Storie di leadership e di mentoring (Present and Future – Stories of Leadership and Mentoring). This five-episode series (in Italian), created in collaboration with Chora Media, aims to inspire new generations and discuss the future of women in leadership. Journalist Francesca Milano brings together Bocconi alumnae who have reached top positions in their fields with current students or recent graduates of the University, turning the conversation about experiences, aspirations, challenges, difficulties, and mistakes into a true mentoring session. Most importantly, the podcast breaks down myths and gender stereotypes that still plague the job market and hinder women's careers in Italy.

Text:

Making an impact in international organizations

What is it like to work for a major international organization? Is it possible to achieve the desired impact? What qualities are needed to thrive in this field? These questions and many more are answered by Federica Ranghieri, Program Leader for Sustainable Development at the World Bank. Ranghieri, who now lives in Cairo after spending more than 15 years in the United States, meets Irene Cozzi, a Bocconi student. Together with Francesca Milano, they discuss the challenges women face, the pursuit of independence, and the importance of networking.

Making your voice heard in the tech world

In this episode, Francesca Milano explores female representation in the technology sector in Italy. Joining her are Veronica Diquattro, currently President of the Consumer Business division at Omio, and Nastasia Tecci, a Bocconi student. Diquattro shares insights from her previous experiences at Google, Spotify, and DAZN, offering Tecci advice on public speaking, staying up-to-date on the latest and most exciting digital trends, and setting medium- to long-term goals.

Becoming a manager and leader in the nonprofit sector

In Italy, the nonprofit sector plays a crucial role both socially and economically. More women than men are employed in this field, yet the number of female professionals decreases as one moves up the hierarchy. This reality is acknowledged by one of the episode's guests, Maria Serena Porcari, CEO of Fondazione Dynamo Camp and President & CEO of Dynamo Academy. Along with Francesca Milano and Bocconi student Maria Vittoria Dini, they discuss the economic and managerial skills required in the sector today, the importance of working in an environment that invests in new generations, and the difference between being a manager and being a "super professional."

Working in startups to solve problems

Francesca Milano meets Diyala D'Aveni, Head of Investments and Venture Building at Vento, and Federica Mariani, a Bocconi student. D'Aveni provides insights into the Italian startup landscape, the risks to consider, and the key trends to watch. She emphasizes the importance of starting from a problem rather than just an idea when creating a business. Mariani also asks for advice on finding the right people to work with and how to deal with failure. The conversation touches on the issue of gender barriers, which unfortunately remain prevalent in Italy.

Investing in and supporting women in finance

The final episode of the series features Arianna Alessi, Vice President of the OTB Foundation and CEO of Red Investments and Brave Wine, alongside Annalisa Sgaramella, a

recent Bocconi graduate and young finance professional. Alessi shares her career journey, which spans both the social and investment sectors, and discusses with Sgaramella the challenges of working in a male-dominated industry. Their conversation, guided by Francesca Milano, highlights the skills and qualities needed to excel in finance and offers reflections on how to continue supporting future generations.

Moral hazard

When financial power gambles with your money by Garrett Levy Brady

Dominant corporate leaders who are results-oriented rather than process oriented increase the risk of irresponsible behavior. We need a system of accountability that puts ethics at the center to avoid new crises and rebuild trust.

Text:

The 2008 financial crisis brought moral hazard - the tendency to take risks when shielded from consequences - into sharp focus, underscoring the critical role of leadership in shaping economic outcomes. The nearly trillion-dollar taxpayer bailout of a reckless financial system, driven by decisions made at the highest levels of power, shook the global economy and exposed the enduring consequences of unchecked risk-taking by those in leadership positions. This event not only cemented a generation's distrust in financial institutions but also highlighted the profound impact that irresponsible leadership can have on global stability, serving as a stark warning in today's volatile economic and political climate.

Far from being confined to 2008, moral hazard continues to influence high-stakes decision-making. The 2023 collapse of Silicon Valley Bank reignited concerns about its effects on innovation and stability in modern finance, revealing how even institutions central to emerging sectors and investment can fall victim to the same reckless behaviors that plagued traditional finance. Similarly, in 2021, U.K. lawmakers criticized the Bank of England's post-pandemic financing of high-carbon industries, highlighting the risks of prioritizing short-term recovery over long-term sustainability. These cases underscore how moral hazard has evolved into a multifaceted issue, affecting not only individual institutions but also broader areas like innovation, environmental stability, and public trust.

The critical question remains, why do some leaders so readily shift the risks of their decisions onto others? To explore this, my co-authors and I examined two distinct orientations by which leaders exert influence: dominance and prestige. Dominant leaders exert control through assertiveness and intimidation, often prioritizing personal objectives over collective goals. Prestigious leaders, in contrast, build influence through collaboration and expertise. Although both styles lead to positions of leadership, dominant leaders are more likely to engage in risky behaviors that benefit themselves while exposing others to harm. To test how leader dominance orientation impacts moral hazard, my co-authors and I conducted 13 comprehensive studies involving over 2,600 observations across financial, environmental, public investment, and public health contexts. In one study, we examined finance professionals, assessing their self-reported dominance orientation. As predicted, individuals with stronger dominance tendencies were more likely to risk clients' capital to maximize their commissions. This finding was replicated with the general population, confirming dominance as a distinct factor driving moral hazard decisions, separate from mere risk preference or greed. In subsequent studies, we found that dominant individuals exhibit a narrow focus on outcomes.

This outcome-oriented focus underscored why dominant leaders are more prone to moral hazard behaviors: their emphasis on results over the methods used to achieve them reveals a critical insight into the psychology of decision-making and the risks it poses.

The findings carry important implications for organizations. Dominance is not inherently harmful - bold decision-making can be crucial during crises - but unchecked dominance can create blind spots. Leaders who focus exclusively on outcomes often overlook the broader consequences of their actions, putting others at risk. To counter this, organizations must establish accountability systems that emphasize ethical processes

alongside results. One study demonstrated this by shifting participants' accountability from outcomes to decision-making ethics, significantly reducing moral hazard behaviors among dominant individuals. This suggests that even dominance-driven leaders can act responsibly when held accountable for their methods.

The challenges of our time - public health crises, financial instability, and climate change - frequently hinge on the decisions of a few powerful individuals. Research shows that moral hazard is not just a structural issue but deeply tied to the psychology of leadership. Dominance-driven leaders are particularly prone to risky behaviors that transfer costs to others.

Boldness and ambition are vital for navigating today's complexities, but they must be tempered with responsibility. By tackling the root causes of moral hazard and implementing systems that promote thoughtful, ethical, and equitable decision-making, we can guide leaders to act in ways that advance the well-being of society while supporting the long-term success of their organizations.

Box: The paper
Perilous and unaccountable: The positive relationship between dominance and moral hazard behaviors, by Garrett L Brady, Hemant Kakkar, Niro Sivanathan

Box: The book
Power does not have a good reputation. Distinctions between being a boss and being a leader - always in favor of the latter - and ready-made formulas on how to lead a group to success fill books, articles, and social media. However, real life is quite different. Power exists, undeniably. Fate pace con il potere by Luca Baiguini (Egea, 2024, 258 pages, €24.90, in Italian) is a book that moves beyond the rhetoric of leadership and instead engages with the realities of everyday life.

Intergenerational poverty

Inequalities are inherited but some countries erase them by Andrea Costa

Poverty is passed on from generation to generation, but not everywhere with the same intensity. A study reveals how Denmark manages to break the cycle with robust public systems, while in the US weak social safety nets condemn many to a predetermined future. Looking at both virtuous models and critical challenges, research shows that poverty is not fate, but a political choice.

Text:

Poverty is not just a challenge of the present – it often follows children into adulthood, perpetuating a cycle of hardship. A new study by Zachary Parolin (Bocconi Department of Social and Political Sciences), written in collaboration with Gøsta Esping-Andersen (formerly at the same Bocconi Department), Rafael Pintro-Schmitt (PhD student at UC Berkeley) and Peter Fallesen (Stockholm University) and published in Nature Human Behaviour, examines this intergenerational persistence of poverty across five high-income countries: the United States, Australia, Denmark, Germany, and the United Kingdom. The research reveals stark differences in how effectively these nations help children escape poverty, highlighting the critical role of public policies.

The findings are compelling. In the United States, growing up in poverty makes a child 43% more likely to be poor as an adult compared to someone who did not experience poverty. Denmark, by contrast, shows a persistence rate of just 8%, thanks to its robust social systems. Australia, the United Kingdom, and Germany sit between these extremes, with persistence rates of 21%, 16%, and 15%, respectively.

The study points to key drivers behind these variations. In Denmark, public systems effectively reduced poverty by offsetting family disadvantages. The United States, by contrast, relies heavily on families to overcome challenges, with little state intervention to alleviate economic hardship. Germany and the UK showed moderate success by combining public support with lower baseline levels of childhood poverty, while Australia's persistence rates reflect its mixed approach to social policy.

In the US, however, weak social safety nets fail to bridge the gap. The study highlights what it calls a "residual poverty penalty" in America, a measure of unexplained disadvantages tied to childhood poverty. Even when accounting for factors like education, employment and family structure, American children from poor families remain at a severe disadvantage. This suggests that systemic issues – like limited access to affordable healthcare and inadequate support systems – play a significant role. "If the US adopted the tax and transfer policies of countries like the UK, its poverty persistence could fall by over a third," Zachary Parolin says.

To uncover these patterns, Parolin and his coauthors analyzed extensive data tracking individuals from childhood into adulthood. They examined how factors like family structure, parental education and state policies affected poverty outcomes. The research also looked at "mediators" like education and employment, and how effectively taxes and transfers (social benefits) reduced the risk of poverty.

Their approach allowed for a unique decomposition of the problem, showing not only how strongly poverty persists but also why it does. In Denmark, for instance, the study found that even when family background heavily influenced outcomes, state interventions often erased these effects. Meanwhile, in the US, limited social programs leave families to bear the brunt of poverty's consequences, with little state intervention to bridge the gap.

This study underscores an inescapable truth: poverty persistence is not inevitable, and public policies make a difference. Denmark's example shows that investing in education, healthcare and family support can transform outcomes for future generations. Conversely, the United States demonstrates the heavy costs of neglecting these systems. For policymakers, the message is clear. Breaking the cycle of poverty requires strengthening safety nets and addressing systemic barriers. As Zachary Parolin puts it, "The story of poverty is shaped, in large part, by the policies we choose. We have the tools to break the cycle – it's largely a question of political will."

Give money to poor families, if you want to fight child poverty by Andrea Celauro

Silvia Paruzzolo,managing director of Evidence for Impact at Save the Children US, explains which evidence-based strategies are the most effective to fight child poverty.

"Don't give a fish, teach how to fish". True, but not always. When it comes to fighting child poverty, for example, sometimes donating money to be used flexibly by those who need it most can make the greatest difference. Silvia Paruzzolo, Bocconi alumna and now managing director of Evidence for impact at Save the Children US, is convinced of this, data at hand. From Washington, where she lives and works, Silvia explains what emerges from the daily activity of the organization founded by British activist Eglantyne Jebb (the opinions expressed in the text are personal views).

Save the Children works in 120 countries, therefore in very different contexts. What are the biggest challenges in the fight against child poverty?

Paradoxically, even though countries and situations are very different, the challenges are similar: it is about working with the poorest and most marginalized families. After all, poverty affects all people in the same way, by preventing access to basic services, quality health and causing extreme stress for parents and their children. Everywhere, in order to survive, families must make choices that do not always allow them to invest effectively in the future of their children.

How do you act in these conditions?

There is no single solution, however, we are increasingly pushing for direct cash transfers to families (cash transfer programs). We have in fact realized, data at hand, that those in poverty know best about what they really need in their context and do not waste resources.

A bit of a reversal of the old adage that it's better to teach how to fish than give a fish, in a certain sense. Doesn't giving cash transfers risk encouraging the disengagement of those who receive them?

There is no shortage of skeptics, obviously. In fact, there is a lot of resistance to the concept. But my answer is always the same: look at the data. Sure, there will always be those who take advantage of the schem, but there is solid scientific evidence that most of the people who receive transfers are intent on improving their condition and know what they need to do to improve their condition more than anyone else. Moreover, we are talking about modest amounts. Cash transfers, then, are part of common approaches to combat child poverty that – we have seen – work.

Which are the other ones?

One, 'Resourcing Families for Better Nutrition' focuses on malnutrition (which does not only affect poor countries, but is also present in rich countries like the US). It combines cash transfers – or facilitation of access to government resources – with activities that help improve eating habits, both those of pregnant women and those of infants in their first three years of age. According to a study we conducted in Somalia, this mixed approach combining cash transfers and social behavior nudges is not only more effective than a simple cash transfer, but also more effective than a larger cash transfer.

The second approach, on the other hand, is called 'Life Skills for Success' and is focused on adolescents. The idea is that, if you want to break the vicious circle of poverty, it is useful to instill the development of certain fundamental soft skills in girls and boys: self-esteem, decision making, problem solving and self-control. Teaching them, in practice, to make better decisions for their future especially in a context where study and work

opportunities are limited and every choice can have a negative or positive long-term impact.

You also mentioned the United States when talking about child poverty. What are the challenges in what is considered the richest nation in the world?
In reality, child poverty also affects the United States and there too the solutions concern access to economic resources. In this, the Child Tax Credit introduced by Biden during Covid, giving the possibility for families with children to have access to more consistent welfare checks, had a positive impact. In addition, we at Save the Children work a lot on the issue of education for the primary school age cohort, especially in the poorest states, such as West Virginia, Mississippi and some other states of the South. There too, as elsewhere in the world, the principle is the same: you work with families.

State-owned enterprises

The challenge of transparency by Annita Florou

A study reveals how Chinese State-owned enterprises omit information about financial risks, adopting ambiguous language to mitigate their perception. This has strong implications for investors and regulators.

Text:

Audit reports are supposed to enhance transparency. However, research I carried out with Xiaoxi Wu, Shuai Yuan and Vincent Zhang shows that state-owned enterprises (SOEs) in China systematically report less information - known as key audit matters (KAMs) - about areas of high-risk of material misstatement that involve significant auditor and management judgment. Besides, they tend to use ambiguous language to obscure financial risks. This raises serious concerns about the reliability of financial disclosures in politically influenced entities.

One would expect SOEs - given their complexity and public accountability – to disclose more KAMs. Instead, they report 4.3% fewer than non-SOEs and are 7.2% more likely to omit KAMs in high-risk areas like revenue recognition, inventory valuation and especially the so-called related party transactions (RPTs), i.e. dealings between the SOE and entities closely linked to it, like subsidiaries or major shareholders. The study suggests that SOEs leverage their government ties to influence how financial risks are presented, effectively controlling their own narrative. This manipulation goes beyond omission. Our study finds that SOEs also use vaguer language in audit reports - less specificity, fewer numerical details and a more sanitized presentation of risks. This strategy allows them to comply with reporting requirements while avoiding disclosures that might raise investor concerns.

Auditors are supposed to be independent, but when dealing with SOEs they face significant pressure to avoid confrontation. Our research reveals that SOE audit reports tend to be shorter, less detailed and contain fewer risk related terms, suggesting a reluctance to highlight problematic areas. This raises a crucial question: If KAMs are meant to flag complex or high-risk areas, what does it mean when SOEs systematically underreport them? For investors, this means extra vigilance is required. The absence of expected

KAMs should not be mistaken for an absence of risk - it may indicate an effort to downplay or conceal it. Related-party transactions, in particular, deserve closer scrutiny, as they often involve dealings between SOEs and politically connected entities, raising the risk of conflicts of interest and misallocation of resources.

To be sure, our findings carry broader implications beyond China. They underscore the fact that financial disclosures are not neutral documents - they can be shaped by political influence, regulatory pressures and corporate incentives. Investors must learn to read between the lines, paying close attention to not just what audit reports say, but what they fail to mention.

Regulators, too, must recognize the limitations of existing audit frameworks. KAMs were introduced to enhance transparency, but their effectiveness is undermined when state-linked firms can manipulate reporting with minimal push back. Stronger oversight is needed to ensure that audits remain a tool for accountability rather than a mechanism for controlled disclosure. We have to face the facts: in SOEs, transparency is often a challenge. Investors should treat vague audit reports and missing KAMs as warning signs, not reassurances. If KAMs are meant to highlight complexity and risk, their absence may be more telling than their presence. Ultimately, financial disclosures are only as reliable as the systems that enforce them. When those systems are compromised – by political

influence, regulatory gaps or auditor pressure – investors must rely on their own skepticism to uncover the full financial picture.

Box: The paper
State Control, Related-Party Transactions and Audit Reporting: Evidence From Key Audit Matters, by Annita Florou , Xiaoxi Wu, and Vincent (Qiru) Zhang.

Sustainability

Banks under pressure: between activism and climate retreat by Clement Jonathan Mazet-Sonilhac

NGO campaigns influence depositors' choices, driving deposits away from less sustainable banks. Meanwhile, many institutions are pulling out of climate alliances such as the NZBA. A study analyzes this intertwining of activism, regulation and finance, revealing how bottom-up pressure can offset top-down retreats and outlining the new dynamics of banking accountability.

Text:

Banks play a key role in capital allocation and are central to financing the green transition. In recent years, banks have made ambitious public commitments to reduce financed emissions, disclose their polluting investments and increase funding for sustainable activities. Notably, over 138 banks, representing more than 40%of global banking assets, have joined the Net Zero Banking Alliance (NZBA), one of the most stringent voluntary climate initiatives launched in 2021. These "net zero banks" have pledged to "align their lending and investment portfolios with net-zero emissions by 2050 and set intermediate targets for 2030 or sooner".

Despite these strong public commitments, recent studies (e.g. Bruno and Lombini, 2023; Giannetti et al., 2023; Marquez-Ibanez et al., 2024) report little significant evidence of divestment from high-carbon-emission firms, casting doubt on the effectiveness of such voluntary private sector initiatives. Adding to these concerns, a recent and striking development saw major US banks, including Bank of America, Citigroup, Goldman Sachs and Wells Fargo, withdraw from the NZBA. This exodus from the coalition reflects mounting political pressure from Republican lawmakers and a broad retreat by companies from environmental initiatives ahead of a second Trump administration, as Donald Trump called climate change a hoax and is expected to roll back related regulations. It raises critical questions about the future and real-world impact of climate alliances.

This shifting landscape makes the role of environmental non-governmental organizations (NGOs) – whose press campaigns have become increasingly influential over the past decade - more critical than ever. NGOs have worked to expose financial institutions' connections to fossil fuel companies, highlighting the gap between banks' public climate pledges and their ongoing funding of carbon-intensive industries. Their "name and shame" strategies often urge the public to switch banks, threatening to penalize financial players for failing to align with environmental goals.

In a recent study Some Don't Like It Hot: Bank Depositors and NGO Campaigns Against Brown Banks, we examine the effects of these NGO campaigns on depositors' behavior. Using data from Sigwatch, a consultancy tracking global NGO activism, we analyze all the campaigns targeting the seven largest banking groups in France, which account for some 95%of domestic household deposits, over the years 2011-2020. Based on the number and intensity of these campaigns, we construct an index of the "brown" reputation of the banks, reflecting the extent to which their sustained lending to fossil fuel firms was publicly criticized by NGOs. The analysis reveals that the banks perceived as brown experience relative declines in household sight deposits, suggesting that public awareness spurred by environmental campaigns translates into action. Importantly, this backlash from individual bank customers mostly materialized following the implementation of France's 2017 "Bank Mobility Regulation", a legal provision which simplified the process of switching banks. After this regulatory change, deposit outflows from brown banks accelerated, suggesting that reduced transaction costs amplify consumer reactions to environmental concerns.

We also highlight geographic and socioeconomic disparities in consumer behavior. In wealthier counties, areas with higher educational attainment or regions with a larger proportion of green voters, depositors began moving funds away from brown banks even before the regulatory change.

What do these findings imply in light of banks withdrawing from climate coalitions like the NZBA? First, they underscore the potential for grassroots activism to counterbalance institutional retreat from environmental commitments. While high-profile exits from climate alliances cast doubt on the efficacy of top-down approaches, bottom-up pressure fueled by NGO campaigns appears to be a promising alternative pathway to hold financial institutions accountable. Second, our findings highlight the critical role of constraining regulatory frameworks in enabling environmentally driven financial behavior and transparency. This supports recent governmental efforts to enhance the credibility and accountability of net-zero commitments, particularly through improved data availability that empowers NGOs to investigate financial institutions' ties to fossil fuel companies

Box: The paper
Some Don't Like it Hot: Bank Depositors and NGO Campaigns Against Brown Banks, by Clément Mazet-Sonilhac, Jean-Stéphane Mésonnier.

Cover story

The AI generation Visionnaires

From research labs to lecture halls, from hospitals to government offices, Artificial Intelligence is redefining our present and our future. Between innovation and regulation, opportunities and risks, we explore the challenges and promises of a technology that can no longer be just theory. Views, strategies and open questions about a change that affects everyone.

Off the charts: the new face of artificial intelligence by Riccardo Zecchina

Are we really that close to machines that think like human beings? Open AI's O3 model has surprising capabilities, but is it a true quantum leap or just an illusion? And while the US and China advance, Europe is lagging behind: it's time to fight back.

Text:

Artificial general intelligence, or AGI, is the type of artificial intelligence that aims to replicate the human ability to solve problems in a wide variety of domains and contexts.

Unlike specialized AI, which is designed for specific tasks, an AGI should be able to adapt to new situations and tackle tasks for which it was not explicitly programmed, exhibiting a human-like level of flexibility.

In recent years there have been amazing advances in generative AI with large language models (LLMs), e.g. ChatGPT, but until recently many believed that this would not be the way to AGI. In recent months, however, the global debate about the similarity between machines and human intelligence has been enlivened by two significant developments. First, OpenAI has unveiled its new O3 problem-solving model (not yet publicly available), an advanced implementation of ChatGPT. Second, the emergence of so-called large concept models (LCMs), which instead of using words to generate answers concatenate short sentences that directly express concepts, has shown promising performance.

Are we really on the brink of human-like artificial intelligence or are we simply surprised by the incremental advances in AI technology?

We try to answer here by considering the case of O3. The announcement of OpenAI inspired much speculation and lofty statements based on some of its characteristics:

1. First, it achieved a remarkable performance in advanced mathematical reasoning on the Frontier Math test, developed by a team of mathematicians. Until recently, artificial intelligence systems achieved a 2% success rate, while O3 achieved 25%.
2. Second, it has made tremendous progress in programming tasks. Developers have observed that it can produce programming codes faster and at a lower computational cost than its predecessors.
3. Third, and this seems to be the most surprising feature, it has achieved unexpected performance in the ARC-AGI test (Abstract and Reasoning Corpus for Artificial General Intelligence, https://arcprize.org/arc). This test tests artificial intelligence systems with graphical puzzles designed to assess reasoning and abstraction ability. While previous models had scored around 55%, O3 achieved an impressive 75% at low computational cost (a few dollars of electricity per answer) and 87% at high computational cost (a few thousand dollars), surpassing the average human score of 76%.

What makes these models different from the large language models like ChatGPT that we have become accustomed to?

Actually, not very much.

The key feature of O3 (a run of the already available O1 model) is its feature of internally generating multiple solution paths generated by LLMs and comparing them by choosing the best one, a strategy known as "chain thinking." In a nutshell, many different solutions are compared and, automatically using other AI systems, a selection is made. It is a feature that makes these systems of the highest conceptual and application interest. I recommend that readers try using O1 to solve nontrivial planning problems. It is of the highest interest to see how problems are set up, decomposed into subproblems, and then often solved. Even when the system fails, the chain of thought remains interesting.

However, we cannot say that it really resembles AGI, at least in the interpretation that links it to human intelligence.

The question of resemblance to human intelligence is misplaced.

Does AGI consist of being able to solve any problem that humans can potentially solve? Or do we think of cognitive abilities that exceed those of humans in a given number of problems? This ambiguity leads to confusing remarkable progress in specific areas, such as ARC-AGI, with the achievement of general intelligence.

Humans are able to solve ARC-AGI problems without special exposure to similar tasks, while O3 compares solutions offered by trained LLMs on vast datasets. If we really had AGI available, it would be able to solve ARC-AGI tests as a special case, but the fact that a specific system knows how to solve such tests does not imply that it is a form of AGI.

To give an example that is often cited by Turing laureate and Meta VP Yann LeCun, young people learn to drive a car in all driving situations with about 20 hours of driving lessons, while AI systems are able to do so similarly only in simple traffic conditions despite being trained on the equivalent of millions of driving hours.

Proponents of the so-called scalability hypothesis believe that by using computational resources to create enough data and generate solutions (a strategy known as "compute into data"), AI systems will eventually outperform human intelligence.

Critics argue that scalability alone cannot bridge the gap with human intelligence. Unlike humans, AI systems have difficulty generalizing knowledge across domains, adapting to novel situations, or learning from minimal examples. These limitations suggest that new models and methodologies will be needed to achieve true general intelligence.

It should be reiterated, however, that both factions believe that some form of AGI will be achieved within a finite time horizon.

The race for AI predominance is moving enormous resources in the United States and, secondarily, in China. Europe remains at a standstill: the time for discussions and laws on regulations and ethics, totally legitimate and agreeable, are outdated by reality. It is necessary to move to a different phase, where a competitive European AI is created. Quantitative figures should be made clear: in order to give birth to competitive R&D European centers, it takes many tens of billions of euros per year (Microsoft alone invests €80 billion/year).

There is no doubt that dominance in AI will correspond to economic dominance. But there's more: owning control of AI will be a huge form of political power.

Right now it is in the hands of a few large technology companies, and we already see how much they influence the political system.

The great impact of the AI system developed by Deepseek shows how sensitive is this matter, and how the battle between Open Source and Proprietary AI software will dominate the scene in the coming years. European politicians urgently need to understand

that we need to take action at the level of the European Union; individual countries cannot meet the challenge.

It is urgent to create the conditions for sustainable, open and democratic AI, which is the opposite of the technological oligarchy we are witnessing.

It will be crucial for Europe and for the global economy. There is an example of such European collaboration: CERN in Geneva. The cost of building the next particle accelerator is estimated at several tens of billions of euros. Well, let's avoid building it and convert CERN into the European AI center, taking advantage of all the top-level management and technological experience accumulated at CERN over the decades. European researchers are ready, there are high-profile European scientific networks working closely with Canada and the UK.

The Deepseek experience shows that China has managed to make substantial progress. Can EU politicians take action?

VisionnAIres: Bocconi brings AI to everyone with gaming tools and scientific scenarios by ChatGPT

Gaming, real-world scenarios and dialogues with great minds of the past: with VisionnAIres, Bocconi takes the scientific dissemination on artificial intelligence to a new level, focusing on engagement and interdisciplinarity.

Text:

In the midst of the digital revolution, Bocconi University launches VisionnAIres – The A.I. Generation, an interactive platform that presents academic research as an immersive and engaging experience. Presented at the AI Festival (February 26-27) of which the university is main partner and host venue, the platform is a bridge between the world of research and the general public, using gaming and gamification to stimulate debate and reflection on the impact of artificial intelligence on society.

Created in collaboration with Logotel, VisionnAIres invites users to explore the future of AI through four key perspectives: Ethics, Future, Foundations and Tools. The journey unfolds through 12 scenarios, each built on the research of Bocconi professors in areas ranging from law to finance, from marketing to health.

Users are asked to make decisions based on real world dilemmas and, based on their answers, receive a profile that reflects their overall approach to AI: Poet of Prompting, Alchemist of Efficiency, Ethical Pioneer or Algorithm Strategist. An innovative way to bring the general public closer to the scientific and policy debate on the opportunities and risks of artificial intelligence.

The initiative is part of the broader framework of Bocconi's strategic investment in AI research and its application in the social sciences. In recent years, the university has strengthened its presence in the field with new programs and courses, research centers and interdisciplinary collaborations, confirming its leading role in developing AI for social science and studying its economic, social and regulatory aspects.

"Artificial intelligence is one of the most relevant challenges of our time, and at Bocconi we believe that its impact must be understood and governed through interdisciplinary approaches," says Rector Francesco Billari. "VisionnAIres represents our commitment to accessible scientific dissemination, based on the rigorous research made our professors and researchers and made engaging thanks to innovative methodologies such as gaming."

Another distinctive element of VisionnAIres is its series of (Im)possible Interviews, in which Bocconi professors engage – thanks to artificial intelligence – with the minds of some of the greatest thinkers and innovators of the past. A format that combines science, technology and storytelling to offer an original perspective on crucial topics for today's society.

Francesca Buffa, Professor of Computational Biology, discusses with Marie Curie the impact of AI on scientific research and medicine. How can artificial intelligence accelerate discoveries in the field of health, similarly to when the discovery of radioactivity opened new frontiers in science?

Oreste Pollicino, Professor of Constitutional Law, discusses with Niccolò Machiavelli the governance of AI, balancing the need for political realism with the dilemma between ethics and necessity. What principles should guide the use of these technologies to ensure fairness and justice?

Gianmario Verona, Professor of Innovation Management, meets with Henry Ford to discuss how artificial intelligence can revolutionize industry today, just as the assembly line did in the 20th century. What are the production challenges of this new industrial revolution?

Riccardo Zecchina, Professor of the Department of Computing Sciences, has a conversation with Isaac Asimov, the father of modern science fiction, on the limits and possibilities of artificial intelligence. Are we really close to the world envisaged by I, Robot and the three laws of robotics, or is reality much more complex?

AI monitoring the health of pumps and motors By Camillo Papini

Quick Algorithm is a startup offering machine-learning software that identifies anomalies in industrial equipment and machinery. Today the fledgling company originally incubated by B4i is experiencing growth and expanding worldwide.

Artificial Intelligence does to industrial machinery what a doctor does to a human patient. The latter detects the patient's vital parameters to treat or prevent illnesses; conversely, Quick Algorithm's proprietary cloud-based software, called Scops.ai, monitors the fundamental values of a piece of machinery such as vibration measurements and energy consumption. In this case, the goal is the early detection of anomalies through an advanced machine-learning system. In this way, Scops.ai can suggest preventive interventions before potential criticalities turn into actual problems, with consequent economic damage to industrial operativity, down to the stoppage of a whole production line.

Quick Algorithm intervenes wherever there is industrial equipment in the form of electric motors, pumps, compressors or conveyor belts, all types in machinery present in large companies as well as in small and medium firms. "We are expanding the sectors covered,from food to pharma, from automotive to the chemical industry," says Francesca Tosi, head of product and board member of the startup incubated by Bocconi for innovation (B4i) and then accelerated by Motor Valley, an accelerator bringing together CDP venture capital, UniCredit and Fondazione Modena, while managed by CRIT and Plug and Play, also in the quality of investors. Focusing on flexibility and scalability, "the service we offer has allowed us to enter foreign markets such as the US, the United Kingdom, Germany and the United Arab Emirates. We estimate we closed 2024 with revenues up 50% from €385,000 in 2023. This year, moreover, we will prepare a new fundraising round, expected to be in the last months of 2025."

Thanks to Scops.ai, Quick Algorithm aims to reduce costs and improve the operational efficiency of industrial plants, decreasing energy consumption by 15% and unexpected production downtime by 30-40% on average. But, according to Tosi, "at the software level, our algorithms are constantly improving, identifying potential problems and related solutions with increasing accuracy and precision. The occurrence of false alarms is now minimal. And from a hardware point of view, we have started to produce our own wireless vibration sensors internally, specifically designed for industrial machinery including pumps, electric motors and compressors. In this way, we are riding the growing IoT (Internet of Things) sensor market." The next steps? "We are expanding the applications of our technology and developing additional sensors to meet specific industry needs," replies the head of product at Quick Algorithm pointing out that the entire IoT industry is experiencing fast growth, supported by industrial plans such as Transition 5.0, although she is quick to point out that "in our business, technology does not replace humans, but rather enables functions that would have been previously costly and difficult to perform, given the vast amount of data coming from different sources. Just think of the commitment it would be needed in terms of human resources to monitor all this information everyday and have the ability to infer clues about upcoming anomalies."

NANDO Helps You Recycle by Camillo Papini

The AI-enabled software that sorts types of waste using image recognition is named after Ferdinand King of Naples. It was created by ReLearn, a Turin startup.

Where do you throw away the cup of coffee you got from the vending machine? As plastic. No. As paper? Not even that. Spoiler: it depends. It certainly doesn't go in the generic waste collection, even if it's dirty. Knowing the exact answer, however, does not depend on being an expert in industrial recycling, but on being able to ask an AI. This is the reason why ReLearn was founded in 2019. This Turin-based cleantech startup was accelerated by Bocconi for innovation (B4i), an entrepreneurial incubator of Bocconi University that supports the founders of startups in their early stages. The coffee cup is just the emblem of erroneous waste sorting, "and its discarding turns out to be the most common mistake that is made at the trash bin," explains Chiara Incorvaia, carbon accounting specialist at ReLearn. "But without the help of new technologies we would not have known for sure. Above all, without Artificial Intelligence we would not be able to understand precisely what our environmental impact is, and how to save an average of 40% on the operating costs of waste management and, again, how to contribute to improving the green knowledge of employees and citizens."

In practice, the technology developed by the startup founded by a group of engineers is called NANDO (from the diminutive of the name of King Ferdinand II of Bourbon who, already in 1832, regulated waste sorting) and is an AI capable of recognizing types of waste from image recognition. This is possible thanks to plug & play sensors installed directly on trash bins and the NANDO.App (this is the full name). With NANDO, the cleaning company takes a pic of the bin before emptying it, and thus records the quantity and quality of the waste contained. "It is thanks to this data, available in real time, that a company, an institution or an event organizer understands the amount of waste it could produce and implement measures to reduce it, or just avoiding emptying the bins before they are full, thus optimizing an operation that has a cost for each bag used in garbage collection," Incorvaia emphasizes. "The leap compared to the past enabled by AI is significant given that we previously proceeded to weigh the waste with a traditional scale and then we had to manually enter the collected data," adds the carbon accounting specialist of ReLearn who, among the advantages of AI, also sees anticipating compliance with increasingly specific environmental regulatory obligations and which will progressively affect not only large companies but also SMEs. ReLearn's clients include Milan's Linate and Malpensa airports, IREN and Iveco, and the cleantech startup often engages its partners' employees with the Circular Challenge, prize winning competitions between company departments to see which one is best at recycling. "Relying on data to organize reward mechanisms for employee engagement contributes to a stronger rooting of environmental awareness. It becomes a value to strive towards," Incorvaia concludes.

Algorithmic diagnosis the silent revolution in medicine by Francesca Buffa

From genomic analysis to medical imaging, AI is transforming medical research and clinical practice. But without ethics, transparency and training, the risk is that innovation will run ahead of safety. Will we be able to govern this epochal change?

Text:

Artificial intelligence (AI) is revolutionizing medicine aided by the unprecedented ability to acquire biological and clinical data and the rapid progress of computational techniques. From biological analyses to the ability to predict therapeutic responses, AI can accelerate both basic scientific research and its applications in medicine. However, it is essential to start training new generations of experts who know how to work in multidisciplinary teams.

AI is already an indispensable tool in basic research, enabling fundamental discoveries and developing new tools in an era where the production of data, both in quantity and resolution, far exceeds human analytical capabilities. A recent example is AlphaFold, a system that predicts the structure of proteins with high accuracy, a problem that was very difficult to crack before the use of sophisticated AI tools. Understanding these structures allows scientists to interpret the functions of proteins and their role in various diseases, accelerating the development of innovative therapies.

Genomics, the study of genes and their functions, is another emblematic example of how machine learning is revolutionizing medicine. AI algorithms are used to analyze genomic data from healthy or sick subjects to identify new treatments, develop drugs or predict responses to existing treatments, improving the effectiveness of medical care (so-called personalized medicine). Due their size and complexity, it would be impossible to analyze genomic data without advanced computational techniques.

Medical imaging is another area where AI is making significant progress. By analyzing diagnostic images such as X-rays, CT scans and MRIs, algorithms can detect abnormalities that are invisible to the human eye, supporting radiologists in identifying cancers and other illnesses at an early stage, when treatments are most effective.

As with every new technology, the application of AI to health faces significant challenges in making sure it conforms to rigorous ethical, safety and transparency standards, facing significant challenges. On the one hand, it is crucial to ensure accurate management of primary data and protect patient privacy and confidentiality. On the other hand, the various steps of data processing, filtering and cleaning, if not done carefully, can reduce the quality of data. Furthermore, validation and verification of AI models are essential to ensure their appropriateness and impartiality, ensuring that models can be easily integrated into daily clinical practice while avoiding the perpetuation of bias and inequalities. This highlights the need for clear regulatory frameworks overseeing the implementation of AI and for the provision adequate training to healthcare professionals.

Finally, the use of AI in the analysis and interpretation of health data requires simultaneous advances in theory, modeling and practical applications. Although the potential is enormous, the high complexity and dimensionality of these data represent a computational challenge that requires more innovative and efficient approaches. It is therefore a priority to invest in training a new generation of computational scientists that are capable of addressing unsolved issues and work in synergy with experts from various disciplines. This training will be crucial to develop highly effective AI tools and ensure appropriate application, with the aim of maximizing the positive impact on global health.

Box: Research

Artificial Intelligence, machine learning, computer science, and data science: Bocconi's research on these topics is anchored in two key institutions: the Department of Computing

Sciences and the BIDSA Research Center (Bocconi Institute for Data Science and Analytics). The Department of Computing Sciences, directed by Riccardo Zecchina, aims to tackle fundamental challenges in computation, artificial intelligence, and their applications in computational neuroscience, biomedicine, socio-economics, and complex system modeling. This goal is supported by a faculty with expertise spanning computer science, mathematics and physics. The BIDSA Research Center, led by Antonio Lijoi, was established in 2016 to promote and facilitate data-driven research at Bocconi University. It represents the university's timely response to the growing interest in data science and the rapidly increasing demand for data scientists across all industrial sectors.

From ethics to law: who will govern the digital age? by Oreste Pollicino

Statements of principle are no longer enough: we need concrete regulation to balance innovation and rights. The European Union is charting the course with the AI Act and the Digital Services Act, but the challenge has only just begun. Will politics be able to keep the pace with technology?

Text:

The expansion of Artificial Intelligence has raised crucial questions about the need to combine technological innovation, protection of fundamental rights and ethical development. While on the one hand the international community has resorted to declarations of ethical principles to govern this revolution, on the other hand there is an urgent need to codify these principles in binding legal norms. The coexistence of ethics and regulation, therefore, is not only a desirable goal, but a necessary step to address the challenges posed by AI in an effective and sustainable way.

The first responses to the challenge of regulating AI have been provided through the drafting of ethical declarations and digital charters of rights. Among these, the Rome Declaration on the Ethics of AI and the Charter of Fundamental Digital Rights, to which academics, experts and policymakers have contributed, represent an attempt to steer the public debate towards a common vision of the ethical implications of technological development.

Although these declarations constitute an important step forward in acknowledging the need for AI governance, they have often proved to be limited in its practical effect. Their non-binding nature leaves a wide margin of discretion to market actors and poses the risk of fragmented and insufficient regulation.

In this context, a fundamental issue emerges: although ethics represents an indispensable framework, it cannot replace the law. Ethical declarations provide ideal guidelines and objectives, but it is only through clear and enforceable legal provisions that an effective balance between technological development and the protection of rights can be ensured.

The European Union has already embarked on this path with regulatory proposals such as the Artificial Intelligence Act (AI Act), which aims to create a common legal framework for the use and development of AI. The AI Act, inspired by a risk-based approach, represents a paradigmatic example of how ethical principles can be translated into concrete rules. It is not a simple transposition exercise, but a transformation process in which ethical principles are expressed as specific legal obligations, calibrated according to the level of risk associated with different AI systems.

The regulation of AI cannot ignore the ongoing conversation dialogue between ethics and law. The highly innovative and dynamic nature of AI requires flexible regulation, capable of rapidly adapting to technological changes. In this context, ethical codes can play a complementary role to legal rules, offering a framework of principles capable of guiding the actions of various actor beyond legal obligations.

Co-regulation, understood as collaboration between public and private actors, represents an effective model for balancing the needs of innovation and protection. This approach allows for the integration of ethical principles into dynamic regulatory frameworks, strengthening the legitimacy and effectiveness of the rules.

A significant example of co-regulation is represented by the voluntary codes of conduct provided for by the Digital Services Act (DSA). These codes, developed in collaboration with digital platforms, aim to mitigate systemic risks, such as disinformation, and to ensure greater responsibility of operators with respect to harmful but not illegal content. Although compliance is voluntary, the DSA recognizes that these codes represent an essential

tool for effective digital regulation, also enabling enforcement powers by the European regulator.

The European Union, with its approach based on risk regulation and co-regulation, has traced a viable path for responsible AI governance. This path, however, requires a constant commitment to ensuring that legal norms reflect shared ethical values, without stifling innovation but guiding it towards sustainable development that respects human rights.

Box: Bachelors

The Bocconi undergraduate programs dedicated to the topics of Artificial Intelligence and data science are embodied in the Bachelor in Mathematical and Computing Sciences for Artificial Intelligence, directed by Carlo Baldassi, and the Bachelor in Economics, Management and Computer Sciences, directed by Omiros Papaspiliopoulos. Both programs are taught exclusively in English. The first program integrates various scientific fields - mathematics, computer science, physics, and economics - all fundamental disciplines for analyzing phenomena in natural, biomedical, and social sciences, and particularly for developing Artificial Intelligence (AI) tools. The second program provides in-depth knowledge of data science along with economic and management skills. It combines a strong quantitative background in mathematics, statistics, and computer science with rigorous training in economics, management and law.

In case of emergency, there is Rilemo by Camillo Papini

The device developed by the company accelerated by B4i, thanks to advanced algorithms based on artificial intelligence, allows to identify in real time pathologies related to the accumulation of fluids in the body.

Text:

Whether it is for a sports injury, a car accident or a house call, today AI plays a key role in transforming the way medical diagnoses are traditionally performed. Rilemo is an innovative Italian startup that integrates AI technologies with a patented portable device, designed to identify in real time pathologies related to the accumulation of fluids in the body, such as blood or edema.

Rilemo combines AI and the physical device to provide diagnostic images wherever the patient is. These images can also be integrated with conventional diagnostic technology such as X-rays and Magnetic Resonance Imaging, enriching the data available to doctors with information on the presence or absence of fluid accumulation, the type of fluids and their quantity. Thanks to the use of advanced embedded AI algorithms, the device does not only capture data, but analyzes it to generate text reports that accelerate and optimize the diagnostic process even outside the hospital.

"Our goal is to bring the diagnosis directly to the patient, wherever they are, to avoid late diagnoses and streamline procedures and reduce waiting times for patients," explains Valentina Lidoni, CEO of Rilemo. "Our device is currently being validated by hospital facilities, focusing on applications for rheumatology and pneumology. However, its versatility will allow us to extend its use to other areas of human medicine in the future."

Rilemo, previously called Previeni, was accelerated by Bocconi for Innovation (B4i) and aims not only to improve the timeliness of diagnosis but also to significantly reduce operating costs in healthcare. By avoiding unnecessary travel, especially for chronic patients, and offering continuous monitoring at home, the technology represents an evolutionary leap towards a more accessible and efficient health care system. To fully exploit the potential of the Artificial Intelligence & Health Care binomial in optimizing clinical procedures and supporting doctors in formulating diagnoses, it is essential to have high-quality data. This requires technological infrastructures that facilitate the exchange of information and interoperability between different actors of the health care system. "Through a connected and integrated network, we can maximize the value of AI, offering citizens simple and secure access to their digital data," concludes Lidoni.

AI is rewriting high school and college education by Gianmario Verona

From chatbot tutors to the current revolution in teaching, artificial intelligence is transforming the way we learn. Discounting all the opportunities and risks, the real issue becomes the ability of institutions of higher education to timely adapt to AI so as to be able to train Generations Alpha and Beta.

Text:

Among the many questions that are fueling the debate on Artificial Intelligence (AI), some of the most fascinating concern the education system. Just as digital has helped redefine parts of secondary and tertiary education curricula over the last fifteen years, ChatGPT and its recent derivations call for a major rethinking that will significantly impact the life of schools and universities around the world.

First of all, to know how to use the tools that AI makes available to us, it is essential to have at least a minimal knowledge of coding, what goes under the heading of Computer Science. This in turn depends on having a good grounding in Mathematics and also Logic – which is often complemented by foundations of Critical Thinking. Pedagogy teaches us that these disciplines should be taught from an early age and it is therefore essential that primary and secondary schools equip themselves to help the newly spawned Beta generation (those born from2025 onwards) to face AI moving down slope rather than uphill, as is instead conversely the case for all the generations that preceded it.

But always with reference to skills, this requires an effort on the part of universities to integrate training in Computer Science skills in their degree programs, regardless of the specific disciplinary fields chosen by students. Bocconi, although it is a university specializing in the field of Social Sciences, has already done so for some years now, and it is nice to see the tendency of national and international universities going in this direction, which means both strengthening STEM departments and integrating them into portions of their educational offer in an innovative way.

Moving along the path linked to the development of skills, we must not be fooled by the idea that AI tools will progressively become simpler with easy-to-use interfaces, as ChatGPT already highlights, as our ability to manage the tool will depend on the knowledge of its design and functioning, as well as on the use of the data it produces. But regardless of the skills, the challenge launched by AI focuses on the method. In fact, the rapid diffusion of ChatGPT, Dall-E, Gemini, Claude, DeepSeek and all the tools that are based on Machine and Deep Learning models have consequences for the two fundamental spheres of higher education: research and teaching.

In fact, Large Language Models and Computer Vision provide researchers around the world with data analytics tools hit her to unthinkable. This is confirmed by some extraordinary discoveries that are taking place in the fields of health, energy and security. Akey example of this is the recent Nobel Prize in Chemistry awarded for solving the protein-folding problems with the help of the AI models developed by Google's DeepMind.

These extraordinary opportunities are counterbalanced by non-trivial risks of artificial data production and plagiarism, which are pushing scientific journals to adopt rigorous ethical rules and strong gatekeepers. Just as is happening in the world of media an entertainment, whose business models are also based on the production and circulation of information and knowledge, it will be important to work on and consolidate the rules of engagement to avoid cases of counterfeiting and plagiarism that compromise the quality of the services offered and the knowledge produced.

But then there is teaching, the basis of the revenue model of any university. The provocative article by Chris Terwiesch of the University of Pennsylvania has shown that

ChatGPT is capable of passing even complex MBA exams, and, if well trained, it could also help write exams quickly. In short, it turns into a potential Teaching Assistant, and professors from various corners of the world have already been employing it this way for a few semesters. In their beautiful book on the use of AI for decisions, Karim Lakhani of Harvard together with Marco Iansiti posit the use of AI to build chatbots that act as real virtual assistants for students, further raising the level of learning. Thinking of boomers like me, it is funny to reflect on the fact that not long ago people were going to class to decode the content of books written cryptically. On the contrary, Generation Z and Generation Alpha have had the opportunity to study from interactive textbooks with videos and links that have allowed a substantial enhancement of the classroom experience. It is no coincidence that in the last fifteen years teaching has evolved substantially compared to the last century, not only by proposing forms of online education and hybrid learning, but above all by modifying the interaction in the classroom itself that can take part of the learning path for granted.

What will plausibly happen soon is that Generation Beta will have the opportunity to study with chatbots of the type we use today to book a flight or question a bill - let's just hope they are more empathetic. This will dramatically increase the possibility of providing more personalized learning and will lead to a substantial rethinking of classroom teaching hours, given that the student will be able to independently learn part of the baggage of the exam of the specific discipline by interacting with a virtual assistant. The future of teaching is therefore destined to reduce the time spent in the classroom and to amplify the time spent receiving students - the so-called office hours - and experimentation to further enhance the learning path of future students.

In short, we are living through a truly fascinating moment in history that will lead to major changes that will further improve the educational system. The theory of innovation, which is rich from the empirical evidence matured over the last hundred years, teaches us that the speed of radical innovation is much quicker than the pace of institutions, which often try to slow it down and shape it according to their own purposes. The institutions in question, School and University, are so crucial for society, but also resilient and not very inclined to change. Since in this case we are talking about truly enhancing knowledge and learning, i.e. the kind of bread Sapiens feeds on to evolve, we hope the utter relevance of AI may be fully understood, so that we try to govern its impact without trying to arrest its development.

Box: Masters of science

There are three master's degree programs focused on these topics. The Master of Science in Artificial Intelligence, directed by Laura Sanità, explores the methods and techniques for developing next generation Artificial Intelligence and machine learning systems. It delves into the fundamentals of mathematics, software engineering, deep learning, natural language processing, and image processing. The Master of Science in Data Analytics and Artificial Intelligence in Health Sciences, established through a partnership between Bocconi University and Humanitas University and launched in November 2024, is designed to train professionals with advanced skills in healthcare data analysis and the application of Artificial Intelligence in medicine. The Msc is directed by Marco Bonetti. Finally, the Master of Science in Data Science and Business Analytics, directed by Alessia Melegaro, is aimed at students with a strong inclination for mathematics, statistics, and computational disciplines, who are also interested in working with data. The program is structured into two tracks - Data Science and Business Analytics - which share a common quantitative foundation.

From hype to reality: the AI that is really needed by Michele Chicco

Dedalus CEO Alberto Calcagno acknowledges the potential of the technology, but invites us not to make it "just a rhetorical exercise". And he urges the health care industry to develop use cases that can change people's lives: "We need to intercept needs".

Text:

It will be a real revolution when Artificial Intelligence changes the core processes of organizations, until then "AI is just a rhetorical exercise". Alberto Calcagno, who has been on the frontier of technology for 25 years and now leads a big name in health software like Dedalus, which employs around 8,000 employees across thirty countries, warns against easy illusions about the use of AI in business. "The current hype risks deflating if the head of the AI department continues to be 3-5 steps removed from the CEO: if we continue like that, we are light years away from integrating technology into the true strategy of a group," underlines the top manager who worked at Fastweb's control deck for over thirteen years.

Are we wasting time?

Like all technological revolutions, artificial intelligence is driven by technology providers who tell us about how AI will create a different world. But it is the use cases that intercept people's needs that make the difference. If we do not move from theory to practice, we are talking about a rhetorical exercise in technology. In Italy, but I could say that for all nations, eighty percent of the investments attributed to AI go to consultancies, hired by companies to understand how and whether to use artificial intelligence, perhaps in absolutely marginal parts of the business. To ensure that AI has the impact on society that the internet has had, we need to be concrete.

How can we avoid missing the opportunities that the development of information technology makes available to science?

We need to make a leap in awareness and apply artificial intelligence to strategic processes. At Dedalus, there are two macro areas where we are testing ourselves: patient services and internal processes. We are a software company and we develop code: the great challenge especially with generative artificial intelligence is to be able to have AI develop software directly or write code with a human-machine mix to allow our 3,000 developers to increase their capabilities. This means placing the technology at the center of strategic processes and seeking to achieve an epochal impact on the business model: if I can develop at double, triple speed, I can go to market and innovate the entire process much faster for the benefit of our clients, who are the hospitals, and their customers, who are the patients.

If for hospitals the acceleration lies in the software, what does AI bring to the table for patients?

There are two areas of application that we are studying. The first is the one related to algorithms that, based on medical parameters, are able to anticipate the probability of a certain clinical course and manage it in an optimal time with the best treatment for the pathology. A major impact, with artificial intelligence software supporting the doctor who is the one that ultimate. We have certified five different predictive algorithms as Medical Devices and now we will extend it to another 15, and then an additional 30. It's IT that becomes a form of clinical management, and the software gives you suggestions to intervene medically.

What is the second path you are taking?

We work on diagnostic imaging. AI can facilitate and make the activity of doctors and nurses in treating injuries more effective, thanks to the algorithm's ability to automatically

and three dimensionally recognize a wound thanks to a simple photograph taken from the cell phone. This allows to save a lot of time (today all observations are recorded manually) as well as ensuring a better quality of care. A solution that is absolutely going in the right direction, because it allows to "give patient time back" to clinicians and at the same time better clinical results for patients.

Why is it difficult to transform established processes, even when innovation offers simpler and more effective solutions?

To do these things you need courage, usually the courage that comes from a CEO. Otherwise, artificial intelligence is made to work on how to optimize the use of office space…In Dedalus, the head of AI reports to me and is also responsible for product strategy. But in this world it can't just be Dedalus doing it, because that's not enough: there must be many more companies that have the courage to work with AI on core processes.

The health care industry has driven many technological revolutions, if you look specifically at your sector, how do you see the future of AI?

Everyone talks about artificial intelligence, but if the question is how many companies have brought it front and center of their strategy, and I would answer that it is less than 10%. The most delicate step, as always, is translating words into actions: you must have the courage to invest, to make organizational decisions. As long as the legal office in companies is more crowded than the AI department, we will be very far away and AI will remain just a stylistic exercise. The challenge, which not everyone will understand, is to overturn the scenario and work to reach the opposite extreme of radical pragmatism. It will not be easy, but if we do not do this, artificial intelligence will not be able to have the positive impact that many expect. Exactly as happened with 5G, for which there was so much anticipation but today is just synonymous with greater bandwidth.

Box: The course

The "Artificial Intelligence generativa" course at SDA Bocconi aims to provide the theoretical foundations of algorithms and structures in Generative AI, analyzing its potential applications in the business context.

Box: The Libguide

The Bocconi Library's guide to better understand the development of Artificial Intelligence.

Algorithms at work: the revolution the public sector cannot ignore by Maria Cucciniello and Greta Nasi

More than 63% of public managers in Europe have initiated projects based on new technologies, but the real hurdle is not technical: leadership, strategies and a culture of innovation are needed. A recent study reveals the challenges and opportunities of a transformation that could reshape the relationship between government and citizens.

Text:

Artificial intelligence (AI) is reshaping public administration across Europe, offering transformative potential to enhance efficiency, decision-making and citizen engagement. Recognizing its strategic importance, the EU has emphasized the need for trustworthy and sustainable AI integration. However, embedding AI solutions within government structures is not without challenges, requiring careful attention to technical complexities, organizational culture and public trust.

AI adoption in the public sector remains in its early stages, characterized by pilot projects and experimental initiatives. As governments transition toward broader implementation, it is crucial to ensure that AI technologies are not only effective but also aligned with organizational values and ethical standards. The EU's Coordinated Plan on AI (2021) underscores the importance of sustainable integration, urging Member States to establish robust frameworks for adoption.

A recent study, conducted by the Joint Research Centre (JRC, 2024) across seven European countries (France, Germany, Spain, Netherlands, Poland, Austria and Sweden), investigated AI readiness in public administrations. These countries, representing a mix of large and small EU Member States, provided diverse perspectives across geographic and administrative contexts. The study, involving 576 public managers, highlights key challenges and enablers of AI adoption through a multifaceted approach.

The study reveals that AI is no longer a distant aspiration for public administrations. Over 63% of surveyed public managers reported having planned AI projects, while more than half had already implemented at least one initiative. However, adoption levels vary across domains, with service delivery and internal operations showing significant progress. Policy decision making lags, potentially due to the complexity of policymaking and concerns about data quality.

Six critical factors for successful AI adoption emerged from the research. First, public managers who recognize AI's potential to improve efficiency, reduce workloads and enhance stakeholder relations are more likely to drive implementation. Second, building capacity in technical, legal, ethical and governance domains is essential for higher adoption rates. Third, clear and well-communicated strategies that align AI initiatives with organizational goals significantly boost implementation success. Fourth, cultures that embrace innovation, risk-taking, and reward novel solutions reduce resistance to AI adoption.

Fifth, leadership that provides resources and incentives fosters organizational buy-in and accelerates adoption. Last, public expectations for efficient, AI-driven services create external drivers for adoption. Interestingly, factors such as collaboration with private parties and national government incentives played a less significant role, challenging assumptions about the reliance on external stakeholders in driving public sector AI initiatives.

Public administrations face distinct challenges compared to the private sector, including legal constraints, accountability to citizens, and political pressures. While citizen demand is a key driver, explicit requests for AI-enabled services are rare, leaving public managers to

interpret and anticipate public expectations. Furthermore, smaller organizations often face barriers such as limited resources, highlighting the need for tailored support mechanisms.

Drawing upon this study and related sources (e.g. the OECD's Governing with Artificial Intelligence: Are Governments Ready? [2024] and the OECD's [2024] G7 Toolkit for Artificial Intelligence in the Public Sector [2024]), several actionable recommendations emerge. The first is that governments must communicate that AI is not a distant concept but an operational reality in many public organizations today; second, sustained investment in technical and nontechnical expertise, including ethics and governance, is critical for long-term success; third, leadership development programs should emphasize fostering innovative organizational cultures and strategic planning for AI adoption; and fourth, continuous evaluation of citizen expectations can help public managers align AI initiatives with public demand, ensuring relevance and trust.

As the EU strives to lead in trustworthy AI, the public sector plays a pivotal role in setting global standards for ethical and effective technology use. Moving from pilot projects to widespread adoption will require addressing the interplay of technological readiness, organizational dynamics and societal expectations.

10 Must-Read Books on Artificial Intelligence
The volumes, published by EGEA, explore in depth the many facets of Artificial Intelligence. From theoretical foundations to practical applications, these books offer a comprehensive overview of the challenges and opportunities surrounding this technology. Essential for scholars, professionals, and enthusiasts, they are key readings for understanding the evolution of AI and its impact on the economy, society, and innovation.

AI Management
Salviotti, Diaferia, and De Rossi offer insights and practical guidance to better understand AI and its real implications in business. They provide the tools to frame AI initiatives in a way that aligns with broader business objectives and digital transformation strategies. All this in the book "AI Management." (Egea, 2024, 176 pages, €24, in Italian).

Il dna delle competenze
Challenge, complexity, and connection are the three fundamental components of how we develop our most valuable skills. But how will we work and develop our personal skills in the future? Will technology replace our jobs, integrate with them, or be part of the solution? These questions are explored in "Il dna delle competenze" by Matt Beane (Egea, 2025, in Italian).

Il nuovo fuoco
In the beginning, there was fire; today, there is Artificial Intelligence. The force transforming our lives can illuminate the path to revolutionary inventions, but it can also slip beyond our control, sparking fires that are difficult to extinguish - fires capable of even shaking democracy. Buchanan and Imbrie discuss this in "Il nuovo fuoco". (BUP, 2024, 368 pages, €29.50, in Italian).

Il pianeta latente
Artificial Intelligence challenges us on our deepest prerogatives, from writing to vision, including decision-making autonomy. We must respond to these intellectual provocations with philosophy, fostering a profound cultural innovation process. This is the discussion in "Il pianeta latente" by Cosimo Accoto. (Egea, 2024, 144 pages, €18, in Italian).

Innovazione a misura di Pmi
"Innovazione a misura di Pmi", by Marco de Biasi, contributes to the dissemination of a "systemic culture" of digitalization and innovation within the Italian managerial and

entrepreneurial landscape, enabling businesses to equip themselves with the tools needed for creating new value. (Egea, 2024, 218 pages, €29.50, in Italian).

Inspired by data

"Inspired by data" explores the transformative potential of Artificial Intelligence across the corporate communications landscape. It provides practical guidance on how to use these technologies as tools while emphasizing the irreplaceable value of human creativity, empathy, and responsibility. (BUP, 2024, 264 pages, €34.90).

Intelligenza artificiale e democrazia

The essay "Intelligenza artificiale e democrazia" by Pollicino and Dunn explores the relationship between emerging technologies and democratic values, focusing on two critical areas: the fight against disinformation and the protection of pluralism and the principle of equality in the face of algorithmic discrimination. (Egea, 2024, 240 pages, €29.90, in Italian).

L'uomo senza proprietà

"L'uomo senza proprietà" by Jacopo Franchi is a reflection on how the relationship between people and "things" is changing through technology. Today, everyday digital objects can escape the exclusive control of their own users, leading to unpredictable consequences. (Egea, 2024, 208 pages, €22, in Italian).

Spatial Shift

The book "Spatial Shift" by Fabio Lalli explores the evolution and expansion of mixed reality, a field that is redefining our daily interactions by merging physical and virtual worlds. It reveals a landscape where the distinction between real and digital is becoming increasingly blurred. (Egea, 2024, 96 pages, €7.99 ePub, in Italian).

Wealth Manager

"Wealth Manager" by Di Mascio and Cervellati explores the evolution of the wealth manager's role in light of technological innovation, particularly AI. It identifies the application of behavioral finance principles as the key method to align the interests of all stakeholders involved. (Egea, 2024, 292 pages, €35.90, in Italian).

When models talk: the new frontier of the social sciences by Arnstein Aassve

Large language models are revolutionizing human behavior research, but how reliable are they? Between astonishing simulations and risks of bias, the future of research lies in the validation and critical use of these technologies.

Text:

If there is one thing we can all agree on, it is that the development of generative AI, particularly Large Language Models (LLMs), is advancing at breakneck speed. This rapid progress is already being felt in the social sciences. Beyond their obvious applications in conducting literature reviews and assisting with document editing, LLMs are poised to transform data collection, analysis and interpretation. They offer social scientists new avenues to generate precise insights into human behavior, societal trends and policy impacts.

For example, LLMs have the potential to simulate human behavior for research purposes. This includes generating realistic survey responses, creating experimental primes and modeling dynamic interactions in online experiments. In 2024, we published a study in the Proceedings of the National Academy of Sciences (PNAS) where we asked respondents from eight low-fertility countries about their perceptions of the ideal family. Participants were presented with descriptions of hypothetical families and asked to rate them on a scale from 1 (not at all ideal) to 10 (perfectly ideal). Using regression analysis, we found that the number of children was not particularly important in individuals' perception of what constitutes the ideal family (a finding that may explain global fertility declines) – while communication and community respect emerged as highly significant factors.

Building on this work, we explored whether LLMs could provide similar rankings. Using several well established models, we collected synthetic data generated by these LLMs. Remarkably, the regression results closely mirrored those from the real respondents. This suggests that LLMs can approximate human responses to a considerable extent, also when the survey instrument is rather sophisticated.

Agent-based models (ABMs) have long been used to create artificial worlds populated by interacting agents. These models can be made more realistic by integrating metadata to reflect actual trends and characteristics. However, a common critique of ABMs is that researchers must specify the agents' decision rules, which can introduce bias or reflect the researchers' own agendas. The advent of LLMs presents an opportunity to replace these ad-hoc rules with AI generative agents capable of autonomous, dynamic interactions.

Yet, a critical question arises: Can we trust LLMs to provide realistic behaviors for AI generative agents and derive reliable trends and patterns? These models are trained on vast datasets of human-generated content, meaning they inherently inherit – and sometimes amplify – existing societal biases.

A further concern is the increasing prevalence of AI-generated content online, which could lead future models to perpetuate and even exacerbate these biases.

Traditional surveys are therefore unlikely to become obsolete. Validating AI-derived conclusions with real-world measures of preferences and behaviors will remain essential. Moreover, there are ethical considerations to address. Issues such as privacy and transparency demand urgent attention. Many LLMs operate as "black boxes," with proprietary algorithms that are inaccessible to researchers. But even when models are transparent, their complexity make them difficult for social scientists to fully comprehend.

To mitigate these challenges, social scientists must adopt certain best practices. One critical step is to analyze research hypotheses using a range of LLMs to ensure robustness. Another promising direction is the development of "personalized" LLMs

through fine-tuning: while most LLMs demonstrate strong general performance, they tend to be less reliable when applied to specific, task-oriented problems – an area of particular relevance for researchers working with focused hypotheses. Fine-tuning involves training an existing LLM on task-specific datasets, enabling the model to deliver more targeted and reliable results.

The incorporation of AI into social science will necessarily require significant upgrades to our current teaching practices. By equipping students with the skills to use, critique and fine-tune LLMs, we can unlock the full potential of AI while maintaining rigorous scientific standards. Still, while LLMs hold tremendous promise for the social sciences, they must be approached with the same rigor. Ethical considerations, transparency and validation against real-world data are paramount.

Economic history

The roots of global cooperation by Andrea Colli

The choice of reconstruction instead of restoration, from Coventry to Bretton Woods, marks the birth of a global order based on the IMF and the World Bank and is essential to understanding today's economic challenges.

Text:

On the evening of May 30, 1962, the first performance of Benjamin Britten's War Requiem took place. It was commissioned to the British composer to celebrate the consecration of the new Coventry Cathedral. The building, designed in the immediate postwar period, was being built alongside the ruins of St Michael's magnificent medieval dome devastated by a Luftwaffe bombing ironically code-named "Moonlight Sonata" on November 14, 1940. The city council had decided that the destroyed structure should not be restored to its previous shape. Next to the ruins, which remained as a testament to war sufferings and the ferocity of the bombing that claimed the lives of 568 people, something entirely new would represent a new beginning.

So the decision was to build from scratch, not to restore the previous architecture. That was the philosophy that informed another major project, which had begun a few months before the end of the war, bringing together economic delegates from 44 Allied nations at the Bretton Woods Conference, in a secluded resort in New Hampshire.

The goal was ambitious: to rebuild a brand-new global economic system, which had imploded over the previous two decades due to two devastating conflicts, a great depression, and the autarchic policies implemented by totalitarian regimes.

The 1944 agreements laid the foundation for the reconstruction of the whole global economy. The mechanisms aimed at the progressive rebirth of economic integration were initially regulated by two institutions that played a strategic and fundamental role. First, the International Monetary Fund (IMF), which began its operations in 1947. Its mission was the promotion of international monetary cooperation through a fixed exchange rate system pegged to the dollar, in order to support the expansion of international trade, thus promoting growth and development. The second pillar was the International Bank for Reconstruction and Development (IBRD). Funded by all the Allied nations, it was initially conceived as a tool for financing the reconstruction of the Old Continent. With the launch of the European Recovery Program (or Marshall Plan), it soon transformed into the first true example of a development bank, engaged in supporting development projects and providing technical assistance. The role of the IBRD - the first nucleus of what would later become the World Bank - led it in 1947 to take on the role of an agency at the service of the United Nations.

In short, the Bretton Woods Conference represented the institutional premise on which the reconstruction and, later, the progressive integration of the global economy unfolded in the decades following the end of the conflict. Alongside the spread to civilian sectors of the technological innovations generated during the years of the war, destined to act as a driving force for a new wave of globalization, the so-called "Bretton Woods system" triggered a process of sustained growth that continues to this day.

On July 22, 1944, the President and the US Secretary of the Treasury Henry Morgenthau Jr. delivered the closing address of the Conference. A brief excerpt helps to understand its spirit and, in many ways, its prophetic innovativeness.

"There is a curious notion that the protection of national interests and the development of international cooperation are conflicting philosophies...we have found on the contrary

that the only genuine safeguard for our national interests lies in international cooperation... This has been the great lesson taught by the war and is, I think, the great lesson of contemporary life - that the peoples of the earth are inseparably linked to one another by a deep, underlying community of purpose.

We are at a crossroads, and we must go one way or the other. The Conference at Bretton Woods has erected a signpost - a signpost pointing down a highway broad enough for all men to walk in step and side by side. If they will set out together, there is nothing on earth that need stop them".

Ideological bias

When individual ideologies affect the rules of the world by Alexandros Kentikelenis

A recent study reveals how the ideological inclinations of international bureaucrats influence the macroeconomic policies recommended by the IMF and other international organizations, highlighting the need for greater transparency and diversity to preserve fairness and legitimacy.

Text:

In the complex architecture of globalization, international organizations like the European Union, the World Trade Organization, the World Bank, and the International Monetary Fund (IMF) wield immense power. Their influence shapes economic policies that directly affect billions of lives worldwide. Traditionally, scholars have viewed these organizations either as tools of powerful states or as collections of dispassionate technocrats implementing standardized policies. However, my recent research - conducted with Valentin Lang and Lukas Wellner - challenges this narrative. It highlights the significant role that the ideological biases of individual bureaucrats play in shaping international policy outcomes.

In theory, global governance is meant to bar personal ideological agendas. International organizations are committed to impartiality, a principle with deep historical roots often enshrined in staff guidelines. As Dag Hammarskjöld, the second UN Secretary-General, stated, international civil servants must "eschew political judgments and actions" and avoid any allegiance to specific ideologies or political parties. But how well do these ideals hold up in practice? Our study focuses on the IMF, specifically examining the policy reforms it mandates through its lending programs. By analyzing a novel dataset that links individual IMF staff members - responsible for negotiating with borrowing countries - to the precise reforms they design, we uncovered striking patterns. Staffers with ideological leanings toward austerity and market liberalization were significantly more likely to recommend these policies. By contrast, their colleagues with differing views were less inclined to impose such measures.

This finding directly challenges the long-standing image of international organizations as impartial entities staffed by homogeneous, interchangeable bureaucrats. Instead, our research reveals that individual staffers bring their ideological biases to the table, and under the right circumstances, these biases influence their decisions. Far from being neutral arbiters, international organizations are sites of contestation where individual perspectives can create significant variability in supposedly uniform policy frameworks.

These revelations have profound implications for our understanding of bureaucracy and global governance. They challenge the perception of international organizations as monolithic institutions and underscore the need to examine not only their official decision making procedures but also the role of individual decision-makers. This nuanced perspective adds complexity to debates about how global governance functions in practice - and, crucially, how it should be improved.

If individual biases play a role in shaping international policies, what should be done? One approach might be to increase oversight of international bureaucrats to ensure fairness and uniformity in decision-making. Such measures could uphold the principle of impartiality and ensure that countries facing similar challenges are treated equitably. However, imposing stricter oversight comes with risks. Excessive scrutiny can stifle the ability of bureaucrats to exercise judgment, particularly in fast-evolving crises. Overly rigid systems may lead to delays, rejection of valuable expertise, or inflexible responses - outcomes that could undermine the effectiveness of these organizations.

To address this tension, we need to rethink how accountability functions in global governance. Most discussions on the topic focus on organizational accountability: transparency, operational oversight, and the ability of member states to influence decisions. While this approach is crucial for addressing systemic issues, it often overlooks the role of individual accountability within these institutions.

Ensuring individual accountability without stifling the autonomy and expertise of bureaucrats is a delicate balance - but one that must be struck if international organizations are to maintain their legitimacy. As antiglobalization sentiment grows and skepticism toward global governance intensifies, the need for equitable and transparent policymaking is more pressing than ever.

Addressing the ideological biases of individual officials requires more than procedural tweaks. It calls for a cultural shift within international organizations, emphasizing transparency in decision-making processes and fostering diversity in recruitment to reflect a broader range of perspectives. By balancing individual autonomy with mechanisms of accountability, we can ensure that international organizations are effective, impartial, and legitimate stewards of global governance in an increasingly polarized world.

Box: The paper
Biased bureaucrats and the policies of international organizations, by Valentin Lang, Lukas Wellner, Alexandros Kentikelenis.

Creativity

Stories endure, images fade by Pier Vittorio Mannucci

A study shows that the success of cultural products, from films to video games, does not depend on visual aspects, but rather on the ability to tell original and captivating stories. From Peanuts to Pixar films, ideas matter more than special effects.

A common tenet guiding many companies today, particularly in the creative and cultural industries - cinema, music, publishing, videogames - is that audiences do not like novelty. We live in the era of remakes, heritage sequels and revisitations of popular stories. This "novelty aversion" has been shown in many empirical studies. However, these studies do not identify what in the product might be driving this novelty aversion. Is it the core idea at the heart of the product, or the way the product is visually presented - its packaging? Judging from their actions, companies seem to think it is the former: while the resources invested to recruit good content creators are shrinking, companies invest a lot of money in creative product designs - CGI, visual effects, covers and the like. In other words, the way the product is presented is assumed to be as important, and often more important, than its core characteristics.

But is this assumption well-founded? My coauthor Davide Orazi and I conducted a study across multiple settings - movie making, boardgames and a lab experiment - to answer this question. The results? Companies have it all mixed up. Audiences actually love creative content, while they are mixed in their reactions to creative packaging. Experts and general audiences alike are instead much more likely to appreciate a product when the content is highly creative, recombining different genres, categories and logics into something new. The same is not true of creative packaging: audiences either care less about it, do not care at all, or even have negative reactions to a product whose packaging is very different from what they are used to seeing. In short, audiences care a lot about creative content, while creative packaging is unimportant and can even be detrimental to product appreciation.

These results are hardly surprising once we take a more historical perspective - something that companies, often fixated on the present and rarely looking backwards, sometimes seem to lack. When we think of highly creative cultural products - those that shaped our collective imagination and became part of our shared cultural heritage - we easily notice that what made those products special was not the creativity of their visuals, but the creativity of their content. Charles Schulz's Peanuts revolutionized comics by talking creatively about serious subjects like alienation and depression, yet its drawings were extremely simple and conventional. Similarly, the most celebrated IPs in the movie industry - those that are engendering the aforementioned sequels and remakes - are popular with audiences because of the creativity of their plots. Top Gun, Back to the Future, Ghostbusters, Indiana Jones, Star Wars and Alien became part of the popular imagination not because of never-before-seen visuals, but because of their creative world building and innovative plot and genre formulas. Alien was famously pitched as "Jaws, but in space" - a notion that sounds crazy, risky, but with a high creative potential. This is not to say that visuals are not important – they are – but they can just be good, without necessarily having to innovate or do something new: quality and creativity are two different things.

Companies need a change in perspective - a change that could actually benefit not only their revenues, but also their costs: paying for the best talent in content creation is still less expensive that developing novel, dazzling visuals - a cost intensive activity where competition and technological development are raising the bar for sophistication, and hence costs, every year. Some recent successes are already applying this formula, like the movie Everything, Everywhere, All at Once.

In his book Creativity, Inc., Ed Catmull, former CEO of Pixar Animation, illustrated a key principle guiding the studio: story is king. Without a creative story, he argued, no movie can be successful. Our study shows that Pixar was indeed right. Creative content is king, creative packaging is not. Companies operating in cultural industries should take notice, and invest accordingly. Pay good talent for good ideas, and success will come knocking.

Box: The paper
Disentangling audiences' reactions to creative content and creative packaging, by Davide C. Orazi and Pier Vittorio Mannucci.

Disability&Work

Overcoming barriers to inclusion by Asya Bellia

Adequate social transfers, targeted policies and strong protections are not a constraint on the economy, but an opportunity for the veritable inclusion of disabled individuals. A comparison between the Anglo-Saxon and Nordic welfare models reveals which of the two strategies is more effective.

Text:

Across the world, there are more than one billion people with disabilities, i.e. 16% of the global population. In other words, 1 in 6 people live with a disability. People with disabilities are exposed to a greater risk of poverty and social exclusion: in the European Union, 29.7% of disabled individuals are at risk of poverty, compared to 18.8% of people without disabilities.

In addition, the employment rate of people with disabilities between 20 and 64 years of age is just 51.3%, compared to 75.6% of people without disabilities. Governments use specific subsidies (e.g. disability pensions) to ensure that people with disabilities have a decent lifestyle, and active employment policies to promote their right to work. On the demand side, active employment policies aim to influence the behavior of companies. Imposing quotas, for example, which require companies to hire a certain number of employees with disabilities, or pay a penalty. Active supply-side labor policies, on the other hand, aim to increase the skills of job seekers, for example through training courses. Finally, worker protection legislation aims to protect them from sudden and/or unjustified dismissal.

Various states combine these three elements (subsidies, active employment policies, worker protection) in different ways. In Anglo-Saxon countries, for example, access to disability transfers is determined by income, subsidies are low and the criteria for receiving them are very stringent. The labor market is extremely flexible, with little protection for workers. In contrast, in Northern European countries, benefits are universalistic and very generous, investments in active employment policies are high, and workers are highly protected. These differences arise from drastically different conceptions of welfare. In Anglo- Saxon countries, welfare has a residual role. It is believed that overly generous benefits would be a disincentive to look for work, and that, in a highly flexible labor market, the level of employment is higher. In fact, employers can hire more easily, knowing that they could fire the new hires relatively quickly should they need to. In Northern European countries, welfare is considered a social investment.

Benefits are seen as tools that provide people with the resources they need to be able to look for a job or continue working, and greater protection of workers prevents them from being fired abruptly in the event of economic crises. These two conceptions of welfare have one thing in common: both believe that active employment policies increase the chances of finding work.

Which policy mix is most effective for increasing the employment of people with disabilities?

As I point out in one of my articles, the literature shows that economic incentives do not represent an employment disincentive: on the contrary, in the countries where benefits are more generous, people with disabilities have a better chance of finding a job. As for the effectiveness of active employment policies, different studies reach conflicting conclusions. What is certain is that, in order to be effective, these policies must be carefully designed. Training courses for the unemployed are often not accessible for people with disabilities. Furthermore, in many countries the penalties for companies that do not comply with reservation quotas are too low, favoring a context where employers

prefer candidates without disabilities to aspiring employees with disabilities but equal qualifications.

Finally, the possibility of easily firing people does not encourage employers to give a chance to disabled candidates. Persons with disabilities often are the last to be hired and the first to be fired, so that in a more flexible labor market, workers with disabilities are more likely to lose their jobs more in a recession. In conclusion, generous disability benefits, investments in well-designed employment policies, and high protection of workers' rights are essential to promote the right to work of disabled individuals and guarantee them a decent livelihood.

Box: The paper
How Do Different Policies Jointly Affect the Employment Prospects of Disabled Individuals? A Review of the Literature, by Asya Bellia

Inclusion means governance and training by Andrea Celauro

Training is one of the key elements for creating a truly inclusive environment in a company, together with staff engagement and governance that includes specific roles and adequate reporting, as Serena Porcari, CEO of Dynamo Camp and President of Dynamo Academy, explains.

Text:

Disability. Yes, but which kind? It could be obvious, but disabilities are not all the same: they can be physical, cognitive, sensorial, behavioral. And they can be temporary rather than permanent, due to discomfort an individual experiences in their personal sphere and is perhaps reflected in their working life. Bocconi alumna Serena Porcari experiences the thousand facets of disability every day in her work as CEO of Dynamo Camp and President of Dynamo Academy: "With Dynamo Camp we have now accumulated twenty years of experience in inclusion, so much so that today some of the people with disabilities we have welcomed have become collaborators and work with us. Dynamo Academy is conversely a consultancy for companies that intend to commit to the development of social sustainability and inclusion," she says.

What are the main critical issues in the management of disability in a company? For example, there is the fact that companies prefer to pay fines rather than hire disabled people.
The issue of fines is certainly true in smaller companies, however, at least in our experience, not many let this procedure be activated. Rather, we note that companies often define inclusion plans and disability policies in line with their strategic vision, but then these policies are not implemented at all organizational levels and thus their benefits often fail to materialize. Sometimes, however, the opposite also happens: valid bottom-up initiatives by individuals which however fail to obtain the commitment of the company's top management. Companies have various tools at their disposal to make inclusion effective, but it is necessary to activate the processes to use them; if this does not happen, it becomes easier to pay the fines rather than commit to an inclusion path.

Companies that turn to Dynamo Academy intend to get valuable advice on how to invest resources in community and inclusion. What advice do you give them?
First of all, create opportunities for employee engagement on issues of personal fragility and involve them at all organizational levels in a concrete way. To give some examples, with respect to what Dynamo Academy offers, we help them experience what it means to live with a form of disability through some specifically designed modules: we let them try climbing in a wheelchair or walk blindfolded, or we ask them to give a presentation without being able to use words, perhaps using a suitable digital technology. Secondly, we observe how important it is for companies to provide roles and office structures specifically devoted to the management of disability and inclusion, such as Disability & Inclusion managers or ERGs (Employee Resource Groups). They are often the result of "sophisticated" governance of sustainability. Many examples prove that when these company figures exist, things start to happen. Where they are missing, however, sensibility towards these issues remains in the abstract. This second point, which concerns governance, is linked to a third, which comes only after having acted on the issue – namely reporting.

Then there is another aspect, which you focus on in a particular way: training.
Yes, this is a key aspect. Companies that truly believe in inclusion always integrate employee training. This is an essential element. When I talk about inclusion and

accessibility, in addition, I am also referring to the integration of technologies, which today have an incredible potential and can contribute enormously on this front.

Are there any positive experiences that have emerged from your work with companies, beyond the best practices we have talked about?

In our experience, when a company has a culture that considers inclusion a value, with the tools mentioned a leap in quality occurs. What we call caring spirit, or caring culture, which is precisely at the basis of the desire for inclusion, becomes a leadership style in certain companies. The next step is to delve deeper into how this can become a strategic factor for business performance and company results.

We talked about inclusion from the corporate side. But how do disabled people experience their presence in the company?

Just over three years ago, our research conducted with Euromedia Research on a sample of 800 individuals highlighted a significant fact: in the face of a generally positive perception of the corporate environment, those who suffered a pathology or disability experienced the work environment with greater difficulty and the resulting data were often in contrast with the overall sample. While 18.6%of the total sample felt they had been subjected to discriminatory behavior, this percentage rose to 41% among people with disabilities. It is therefore clear that there is still seeping dissatisfaction. I also believe that the lack of inclusion is felt more acutely for nonphysical pathologies and in particular for cognitive and behavioral or intellectual disabilities. Pathologies or disabilities that are often not immediately visible. And for this reason, once again, training of all employees is essential.

The alumnus

Transforming traumatic events into philanthropy by Michele Chicco

For Matteo Morandi, CEO of Percassi Retail, time stopped on November 18, 2021, when his son had an accident and ended up in a coma. Out of that dramatic experience, a Foundation that deals with health, school and sports, and a book were born.

Text:

There are watershed moments that divide the memories of a life into a before and an after. For Matteo Morandi the moment occurred on November 18, 2021: his son Mattia, 17, had a motorcycle accident and ended up in hospital in near-death conditions. In coma for two months, and hospitalized for six, he had to undergo surgery 15 times and a year of rehabilitation. For Morandi, a long-time manager and CEO of Percassi Retail, it was like restarting from ground zero: "Everything was called into question," he says today that his son is a medical student in Florence and Fondazione Morandi ETS is dedicated to celebrating the gift of a life returned and the second chance his family had with Mattia to give back to the local community, especially on health services. A life journey told in the autobiographical novel "Inattesa" (Unexpected), written with Lidia Labianca and published by Egea.

Very hard days and months when your son was hospitalized, what impact did they have on your life?

I would call it devastating. When those things happen, everything is called into question, but we immediately tried to transform the risk of losing our son into something positive. It was thate approach that led us to create the Morandi Foundation that deals with health care, school and sports to give back to the community what was given back to us after a year of fighting to bring our son back home from grievous injury. But to get through those months I had to scrape everything I had in me many times: you have to find the energy you don't expect to have and do it continuously. I didn't think I could be able to do it, it was a discovery.

And you had to reconcile everything with company duties.

Those were the months when we were emerging from the complicated years linked to Covid, among the most complex periods of my career. But the energy can be found if you look hard enough. And the years since 2022 have been the best ones: an unexpected traumatic event can have a positive impact when there is a reaction. Even when you think you've seen it all, you have to know how to turn the world's greatest fear, the death of one's child, into something positive.

What is the key that made you turn the corner?

It's something you've got to find inside you, because in those moments you are completely alone and nothing prepares you to face the difficulties. There is no manual. It came naturally, the idea developed in a few hours: a foundation and a book. I don't know what went on in my mind, but in those moments you cling to anything. I clung to faith, but also obviously to the professionalism and ability of the doctors: we had boundless faith in the people we met at San Gerardo in Monza. An incredible public hospital, with a fantastic medical team with world-class excellence.

You were a student at Bocconi University, what were the lessons you learned in overcoming unexpected difficulties like these?

I have always been an atypical student: versatile, curious, multidisciplinary and fond of contamination. In these three years, having a mind trained every day to face the

unexpected and knowing how to manage uncertainties has helped me. I think that another thing that I have carried with me since the years at the university is the importance of the family: it has always been a crucial element in my life.

Fondazione Morandi was born on paper when you and your wife were in and out of your son's intensive care unit. What's its mission?

We work a lot on healthcare and on the training of doctors and nurses who deal with the management of major traumatic injuries and emergency surgery. We are focused on rehabilitation, with a group of physiotherapists with whom we will begin a path to support the recovery of those who cannot afford the costs of a good physical recovery program. And then we are launching an applied research project on hemorrhages.

The Foundation also deals with school and sports.

In the world of education, we support with scholarships teenagers who have little economic possibilities and want to start a career as doctors or nurses. We help them get into medical school, which is very difficult. And we focus on, due to the commitment of my daughter who is a professional volleyball player, playing in Serie A1 for Uyba Busto Arsizio. We launched Tatticamente, a project for the creation of a medical-scientific protocol to train young students with specific learning disabilities (DSA, the Italian acronym) in sports. Something unique in Europe: we have made two neuropsychiatrists available and we are working with about sixty coaches to create training methodologies for those kids who have a completely original way of understanding, intending, reading, writing. A gigantic project.

How do you reconcile the two professions you now have?

It has become a mission now, but my wife Paola also gives me a huge help and we have a technical-scientific committee within the foundation that supports us in our decision process. The foundation was built with a long-term approach, we have friends who help us and everything is done completely free of charge: all the fundraising we do goes entirely to finance the projects. We are all volunteers: a huge commitment that gives immense satisfaction.

Do all the proceeds from the book also go to support the foundation?

All the proceeds and all the royalties coming from Egea are given to the Foundation. We have a big project in the works: the construction of Casa Morandi, a physical building that we would like to build of Monza to be able to provide our services free of charge. The goal is to integrate everything we do, from rehabilitation to training and community support, in a highly functional and synergic context. We are working on it with the Lombardy Region and with the San Gerardo Hospital of Monza. We want this House to also be used for pain therapy and palliative care for pediatric patients, to help families that must deal with their children being in terminal care. An extremely painful and sensitive issue that is difficult to address.

Box: The book

It's November 18, 2021, when an unpredictable event marks the life ofMatteo Morandi and his family.Mattia, his high school-aged son, has a motorcycle accident. The 'Event', as the author calls it, transforms Matteo's days into an endless 'in attesa' (waiting) but also into an 'inattesa' (unexpected) opportunity for a profound yet pragmatic reflection on the values and relationships that give meaning to our lives and work. This is how Inattesa (Egea, 2024, 240 pages, €20, in Italian) came to be.

Energy crisis

The gas market after the storm by Michele Polo

Since Russia's invasion of Ukraine, Europe has rewritten its energy strategy, replacing Russian gas with natural gas from Norway and LNG imports. But price volatility and dependence on speculative markets remain open issues. Caught between the need for new infrastructure and decarbonization objectives, Europe's energy future is still in precarious balance between security and sustainability.

Text:

Almost three years after the invasion of Ukraine, the energy market has yet to find some stability. The European Union reacted in a united way to Russian aggression, ending a a decades-long path marked by a very high dependence (45%) from natural gas imports from Russia at stable and convenient prices, underpinning the energy systems of many European countries, including two of its manufacturing giants, Germany and Italy. in a matter of days, natural gas, once synonymous with secure and cheap supplies, became a geopolitical liability that pushed the Union to radically change course, with the aim of freeing itself from Russian dependence.

On the supply side, imports from Russia have dramatically decreased since 2022, going from 150 billion cubic meters in 2021 to 78.8 billion in 2022, and 43 billion in 2023 (data for 2024 are not yet available). This very sharp contraction was offset by a major increase in supplies from Norway and imports of Liquefied Natural Gas (LNG) from the United States and other non-European countries. On the demand side, Europe's market remained substantially unchanged in 2022 compared to 2021 at 334 billion cubic meters, and significantly fell in 2023 to 290 billion cubic meters, both due to the voluntary reduction tools introduced by the European Commission and adopted by many member countries, and the impact of higher energy prices on users' consumption.

The inevitable tensions of such an abrupt and radical change in the gas market were translated into price hikes: after a decade of stability, prices began to grow starting in 2021 and then soared to levels never reached before, peaking in the summer of 2022, to subsequently settle at levels that were still 50% higher than pre-war values. Electricity prices experienced a similar dynamic, driven by rising costs at gas-fired power plants which om turn set the price for the whole wholesale electricity market during the day. If the Commission's policies have therefore guaranteed security of supplies, through the containment of demand and a radical change in supply flows, although the abruptness of the process led to a marked increase in the cost of energy, many problems still remain open on the agenda.

On the supply side, the void left by the abandonment of Russian gas pipelines could only be filled by LNG supplies carried by tank ships. This requires new infrastructure, regasification terminals, and an improvement in intra-European connections along the new import routes.

The price of natural gas overduly affected by speculative fluctuations om wholesale markets, first and foremost the Dutch TTF, where transactions lead to speculative bubbles and unjustified increases compared to actual market imbalances between supply and demand. Furthermore, although the quantity of gas traded on these markets is much lower than natural gas purchased through long-term contracts, the fact that these supplies are indexed with respect to the TTF transmits the fluctuations in spot prices to the whole market. One challenge is therefore to loosen this link and reduce the speculative component of gas pricing in spot markets.

Another challenge lies in reforming the functioning of the wholesale electricity market, in order to mitigate the correlation between the price of gas and the cost of electricity, a path that the European Union has undertaken by advancing proposals last year.

A further challenge concerns reconciling the needs of security in supply with decarbonization policies, for which the European Union boasts global primacy. The development of renewable energy entails a reduction in gas consumption to produce electricity, and higher energy efficiency of new buildings reduces the consumption of gas for heating, but the path still appears long, and the necessary investments huge to decrease Europe's reliance on imported gas.

Art market

Beyond price by Marta Equi Pierazzini and Laura Forti

Expansion, resilience and transformation define the global art system, where the value of artwork is a multidimensional prism: not just financial, but also cultural, social and historical, reflecting the complexities of our time.

Developed intensively in recent decades, in terms of the number of actors, volumes, variety and functions of the institutional apparatus and articulated on a global basis, the art system is an organism characterized by structural complexity and a peculiar capacity to change rapidly and at the same time be resilient in its deepest lines.

As we highlight in an our recent contribution (Marta Equi Pierazzini, Laura Forti, Il mercato globale dell'arte, in Il diritto e la fiscalità dei mercati internazionali dell'arte, Wolters Kluwer, 2024), the art market as we know it today has its roots in the second half of the 19th century, in Paris, with the transition from the predominant role of the Academies of Fine Arts and the associated official salons to a system centered on the cultural sensibility and commercial strategies of galleries. If the first three decades of the 20th century saw the opening of major museums (MoMA, Guggenheim and Whitney in New York, for example) and the growing importance of the American market, the '70s saw the birth of art fairs, central players in the art world. But it is only since the 2000s that the system has undergone a radical expansion.

In 20 years, from 2000 to 2020, the number of auction houses has doubled (from 467 to 843), contemporary artists in auctions have increased from 5,400 to 32,000, and the total auction turnover for contemporary art has risen from $92 million to almost $2 billion (Artprice 2020). Art fairs have become increasingly common, growing since 2000 up to a peak of 359 in 2023 (McAndrews 2024). The system obviously underwent a setback during the pandemic years, with a decline in the number of live events and sales, but it is showing signs of steep recovery and adaptation, with the added legacy of a significant development of digital channels (Hiscox 2023). Today, the current market is estimated at $65 bn, with the dealer sector accounting for $36 bn and the auction sector accounting for $29 bn.

Following a trend that has been consolidating since the early 2000s, post-war and contemporary art has emerged as the most relevant segment.

Painting remains the most traded medium, with China, the United States and the United Kingdom as the principal markets (McAndrews 2024). At the core of the global art market are artistic practices and research. It is an environment that performs the peculiar action of valuing the unique (Karpik 2010): it trades in artistic goods. These are not just commodities, but multidimensional prisms endowed with different agencies, often performing important critical and political role in our societies, characterized by incommensurability, uncertain quality and multidimensionality.

The multidimensionality of the value of an artistic good is conventionally represented (and only partially captured) by the price. This is the result of an ambiguous and collective process of valorization and judgement, obtained through a common dialogue and interaction between traditional commercial and cultural actors. The art system is a world in which art is produced, thought about, desired, sought after. And also judged, valued, promoted and protected. And where, ultimately, the conditions are created for practices, research, subjectivities and questions to be seen, debated and consigned to history.

Box: The book
Digital transformation requires a reassessment of the economic and legal framework surrounding artworks and cultural heritage. Leveraging the concept of cultural

responsibility in the enhancement of artistic heritage, Economia dell'arte by Annapaola Negri- Clementi (Egea, 2023, 536 pages, €65, in Italian) analyzes both the traditional and the most innovative dynamics of the arts market, defining new legal paradigms to interpret evolving economic contexts.

Overtourism

Destinations at the limit by Cristina Mottironi

Overtourism is not just a problem of quantity but also of flow management. Balancing the needs of economic development with the protection of local heritage and assets is the key to sustainable and inclusive tourism.

Text:

Overtourism is one of the watchwords of the moment, recently added to dictionaries and increasingly present in the media and in public and policy debates, not least at the G7 Tourism Ministers' Meeting held in Florence last fall. A word of recent coinage to describe a well-known phenomenon, namely the negative impact that an excessive number of visitors can have on a destination.

Although it has been a known problem for decades, in recent years it has taken global dimensions, attracting the attention of researchers, politicians and the media as the result of a combination of factors that are creating a "perfect storm". The continued expansion of the global middle class generated 1.5 billion international arrivals in 2024 and the number of 2 billion is expected to be attained by 2030. The reduction in travel costs and the increase in direct connections, also thanks to low-cost airlines, and the spread of platforms for hospitality and short-term tourist rentals have made a greater number of trips per capita possible, but also favored short stays and quick visits. Furthermore, direct access to information and the influence of social media have exponentially promoted iconic destinations, creating a wish list that tourists feel the need to complete. In some territories, the combination of these phenomena has led to uncontrolled developments, with local infrastructure and resources that often cannot keep up with demand from visitors.

This is why translating overtourism as simply overcrowding is reductive. Discomfort, environmental and cultural degradation, loss of authenticity, impacts on host communities are just some of the well-known impacts the word overtourism is associated with. Recent research highlights the fact that overtourism occurs when various thresholds of the carrying capacity of a territory are exceeded, including political or administrative capacity. This aspect is interesting because it brings the issue of destination management and the effects of tourism to the center of the debate on cities and their policies. It is a fact that many destinations continue to promote tourism without simultaneously adopting adequate measures to manage tourist flows.

To effectively address the problem of overtourism, however, it is essential that the public debate goes beyond the simple dramatization of the phenomenon. Focusing exclusively on the negative effects risks yielding an unbalanced vision, which does not acknowledge the role that tourism can be a part of the solution, not just the source of the problem. A more constructive approach would be to enhance the efforts that many destinations are already making to manage tourist flows in a sustainable way, aware of the significant economic benefits and in terms of social and cultural exchange that the sector brings. In many destinations, local administrations, industry operators and various stakeholders are adopting innovative measures to mitigate the impact of tourism, by balancing the sometime diverging needs of residents, visitors and local communities. Ignoring these policy advances while demonizing tourism as the sole cause of all cities' problems is not very productive.

It is desirable that tourist destinations adopt a mix of tools acting on at least three main fronts: prevention, management, and promotion of sustainable practices.

This implies the implementation of regulatory measures, even restrictive measures in some cases, the use of innovative solutions for the management of flows supported by technological advances, and an adequate strategy for promoting places and events. The goal is to balance two central aspects of the problem: reducing the excessive concentration of tourist flows and the overcoming of existing positions of rent that do not favor innovation and quality of the hospitality offer. Overtourism is therefore not just a question of numbers, but also of sustainable management. For a long time, the metric of success for a tourism destination was the number of visitors, but now it has become clear that it is necessary to rethink this. Losing the challenge of overtourism would be an impoverishment for everyone, since, if we look closely, we are both host community members and visiting travelers in our lives.

Box: The book

The segment of Roots Tourism travelers exhibits highly specific characteristics and needs, requiring targeted marketing strategies that consider their motivations, expectations, tastes, and preferences. The book Turismo delle radici represents an innovative contribution to the study of this form of tourism with the goal of providing public and private operators with policies, actions, and tools to design a competitive tourism offering. (Egea, 2024, 266 pages, €29.50, in Italian).

Regulations

Regulatory maze: can Europe afford it? by Claudia Imperatore

Overregulation is stifling European businesses,with regulatory fragmentation generating costs and inefficiencies. Protecting investors is crucial. Without coordination among regulators, however, there is a risk of penalizing competitiveness in the EU compared to the US. It is time to simplify rules to set innovation free.

Text:

In a recent speech to the European Commission, Mario Draghi highlighted how European firms are exposed to a large and growing number of regulations. A prime example is the banking sector, where banks must comply with regulatory requirements common to non-financial companies, but also with specific provisions of central banks and banking supervisory committees (such as the Basel Committee). Another case is that of ESG regulation. In recent years, the European Union has issued several directives to push companies to be more sustainable. From the SFDR - which aims to promote and support sustainable investment practices in the financial services sector - to the CSDR - which this year introduces the obligation to prepare sustainability reports - European firms are coping with an increasing number of ESG regulatory requirements. According to Datamaran, the number of regulations and initiatives concerning non-financial issues increased by 72% from 2013 to 2018.

Notably, while over the period 2019-2024, 3,500 pieces of legislation were enacted in the US, 13,000 were passed in the EU in the same period of time. Hence, regulation is larger and growing faster than in comparable economies. Moreover, EU legislation is subject to frequent changes over time and requires a national transposition of EU laws. Notably, at the local level, firms can be exposed to additional national rules other than EU ones. The presence of multiple regulatory layers implies that more than one regulation can oversee the same issue leading to so-called regulatory fragmentation. Despite the mounting evidence that regulatory fragmentation exists, its pros and cons are still under debate.

On the one hand, academics point out that the presence of multiple regulators is beneficial for protecting investors, as regulators with different knowledge and expertise can complement their enforcement activities, enhancing the accountability of regulatees. On the other hand, there is a concern that the existence of multiple regulators is costly for firms, especially when regulators do not coordinate. A lack of coordination can lead to redundancies and inconsistencies among regulations. According to a Business Europe gap analysis of 13 EU laws, 169 requirements were duplicates, 11% of which included inconsistencies. Furthermore, it can generate uncertainty among firms about which regulations they should follow, increasing the compliance costs. In addition, firms can prioritize compliance with regulators over which they have a stronger influence.

Under this perspective, the presence of multiple regulations may not be optimal for firms. In line with this idea, recent empirical evidence shows that regulatory fragmentation is associated with lower firm productivity, profitability and growth. These results are consistent with Draghi's claim that EU regulation is "a major source of regulatory burden, magnified by a lack of guidance to facilitate the application of complex rules and to clarify the interaction between various pieces of legislation." Draghi encouraged the reduction of regulatory obligations for EU firms by 25% (50% for SMEs), to protect their competitive advantage and spur innovation. Carrying out such a decrease is not easy, as shrinking the regulatory burden for firms needs to be balanced with adequate protection of investors. Furthermore, given the potential synergies among regulators, for the reduction to be effective, regulators should cooperate and coordinate their actions.

The joint effort of regulators is a key prerequisite to maintaining investor protection and integrity of financial markets while depressing compliance costs for firms. Yet, coordination of regulators can be a challenge, as regulators often protect specific interests and compete with each other to be the most powerful and effective. Yet, overcoming such dynamics seems crucial to loosen the regulatory burden on firms and ensure that compliance with regulation is not an impediment to the success of firms.

The author

Europe needs to pull back depressed areas from decades of neglect by Diana Cavalcoli

Entire regions have been abandoned by central policymakers, leading to economic neglect and escalating social inequality, as Paul Collier explains in his recent book. A trend that to be reversed requires public finance to take the lead in the industrial regeneration of disadvantaged communities with the involvement of local stakeholders. Stuttgart is a good example in this sense.

Text:

Workers left behind, families experiencing economic hardship in big cities as well as in the suburbs, young people with fewer job opportunities because they were born in depressed areas and forgotten by central administrations. There are millions of abandoned people in the world and they live closer to you than you think, according to Paul Collier. In his book account of the neglected masses of the West, Poveri e abbandonati (Poor and Abandoned. A new economics for the left behind, Bocconi University Press, 2024, in Italian), Collier, Professor of Economics and Public Policy at the Blavatnik School of Government at the University of Oxford, explains how many of the inequalities we observe today arise from mistaken beliefs and wrongheaded ideas in economic policymaking. One above all: the belief that every poor area can find its path to progress thanks to market forces. "In this sense I think the United Kingdom - says the professor - is an extreme case, and the book is partly a criticism of the nation, not only because I happen to be British but because it is the most extreme example of inequality in the entire western world. A condition that contributed to Brexit and that offers us many lessons to be learned." The first, according to Collier, is that when we talk about poor areas we need to overcome the developed/developing world dichotomy, given that on the "podium" of inequality there are corners of the planet very close to us Europeans.

Collier highlights how Western and centralized economies have been among the most ineffective in mitigating poverty, transforming themselves into countries where social mobility is at a standstill, there is no redistribution of wealth and inequalities are growing. A phenomenon that is evident when analyzing the labor market. Collier says: "Everything starts with jobs and professions. Great Britain has been incredibly negligent in investing in professional skills. I am thinking of technical and specialized labor: from construction to health care, which is the industry of the future and is in crisis. Great Britain has 18 of the 100 best universities in the world but does not exploit this lever sufficiently. For example, we only train 40% of the doctors we need yearly for the National Health Service and universities, and this is extremely serious, they have now lost their relationship with the territory."

An own goal also for the manufacturing system because "that ecosystem that helps small businesses grow and have access to technology and new solutions is missing". In short, there is a lack of redistribution of the skills needed to develop solid local economies. "We lost - Collier underlines - this tradition already in the 1960s, when the sources of funding for universities moved from local industrialists to Whitehall in London." Collier gives a concrete example: South Yorkshire, once a hub of the steel industry, today the poorest county in the United Kingdom. "When the University of Sheffield was founded there was a partnership between the steel workers and the local steel baron. It was a wonderful example of a community that came together around building the future, represented by the creation of a university. Today all this has been lost, with the exception of Cambridge and Oxford which are closer to London's financial industry, leading to a centralization of financial power that has weakened many local territories," he adds.

But how can the trend be reversed once a locality is hit by a depressive shock? For Collier, given that private finance tends to flee places hit by crises, to reverse the trend public finance must enter the playing field and be the first to take on risk. The European financial institutions can do a lot in this sense. And the reference goes to entities such as the European Investment Bank and the EBRD, the European Bank for Reconstruction and Development, which according to Collier are accelerating many industrial regeneration projects. These are possible only if they also involve the territorial stakeholders, from universities understood as research and development centers, to local communities.

The example par excellence is Stuttgart which, unlike other cities centered around the automotive industry such as Detroit in the United States, has avoided the crisis by transforming its industrial plants into centers and laboratories of innovation. It is no coincidence that a recurring word in Collier's book is agency, namely the capacity to collectively act of those who live in the places left behind, guaranteeing their capacity for self-determination. This is possible if the conditions for bottom-up territorial policies are created. A model that presupposes the existence of a forward-looking political class, capable of supporting change.

Having made these premises, Collier explains that the model is replicable in the many depressed areas of the world today: from the United States to Japan, from Zambia to Colombia to realities closer to us. Speaking of Italy, the reference is to the potential of the economically depressed areas of the Mezzogiorno. "To regenerate these territories - he says - it is necessary to evaluate the strengths of local economies. In Puglia, for example, despite there being critical issues, from demographics to poor investment, there are enormous opportunities coming from tourism but also agriculture, facilitated by the favorable climate.

What is still missing is the right ecosystem for relaunching growth." There also needs to be forms of external financing capable of supporting entrepreneurial risk. "Without risk finance, rapid growth is impossible. I am convinced, however, that there is hope in this sense in Europe. There is a new sense of realism, I believe, throughout Europe, and Italy can be a reference in this sense. The German government recently collapsed and so did the French one: the old Franco-German partnership has become outdated and Italy is in a favorable position today." The EU can have the strength to grow if it acts united, says the professor. "I believe that the Draghi Report the right wake-up call for Europe. I think there is a real possibility that the European Commission shifts its attention from regulations that are making everybody's lives impossible to measures that really encourage governments to invest in the future." And Europe's future passes through the regeneration of those territories and the retraining those workers what have been and felt abandoned for a long time.

Box: The book
Paul Collier, one of the world's leading experts on inequality, travels through places left behind in space and time, seeking the common elements of decline and rebirth. Drawing on new insights from the humanities, he shares a manifesto of hope. (Bocconi University Press, 2024, 328 pages, €25, in Italian).