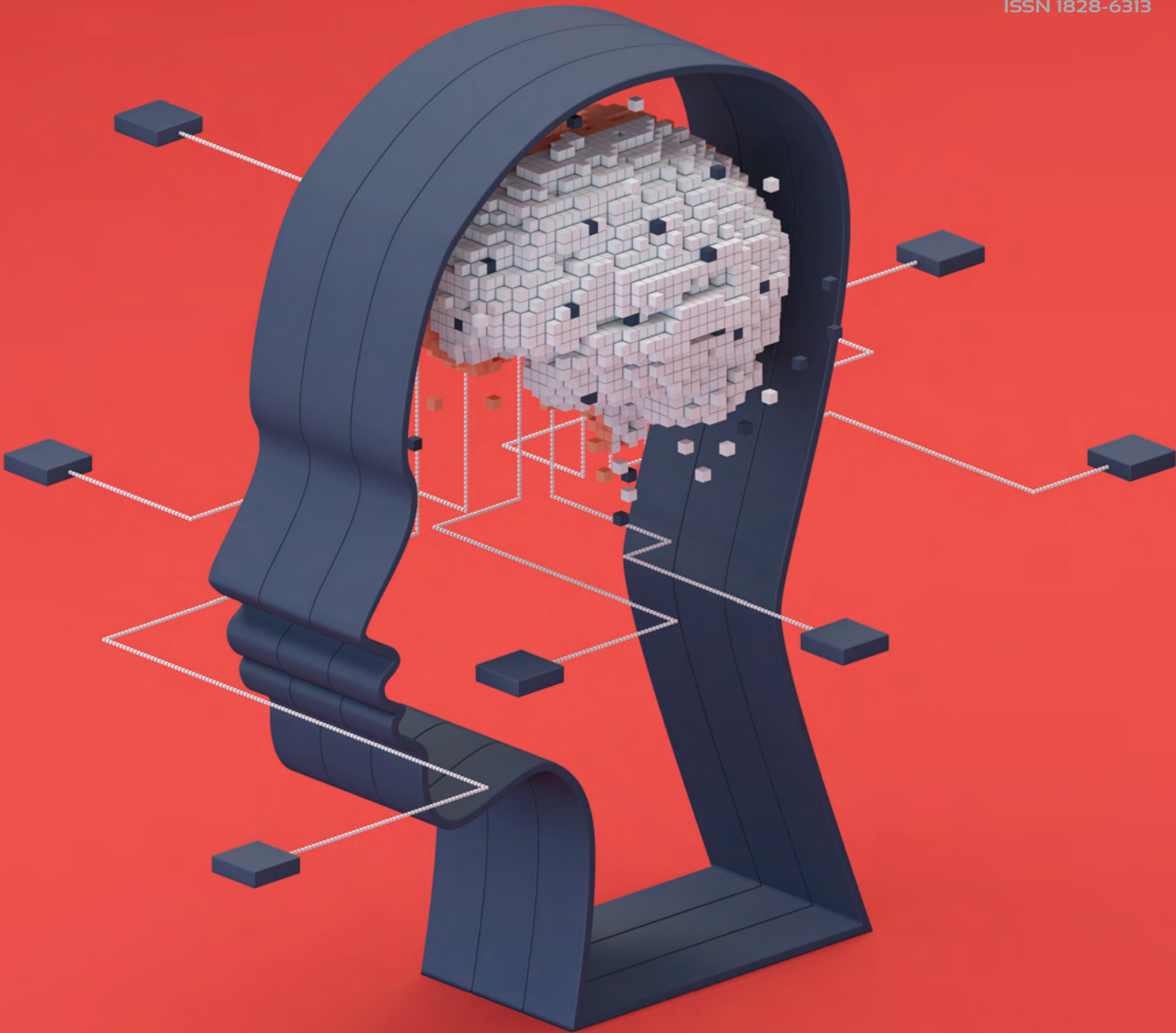


viaSarfatti25

BOCCONI UNIVERSITY, KNOWLEDGE THAT MATTERS

Issue 2 / 2022

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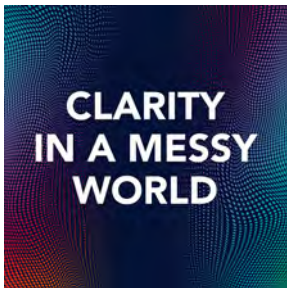
REAL IMPACT

Artificial Intelligence is changing our lives and jobs. The most promising results come from the interaction with the social sciences. This is why Bocconi now has a Department of Computing Sciences

Bocconi Podcasts **MUCH MORE THAN WORDS**

Bocconi podcasts enable listeners to go deeper and learn more about topics that really matter, in order to get inspired and gain new perspectives on relevant issues. Another way to fulfill our mission of spreading knowledge around the world.

Welcome to our podcasts.



What are the causes behind the most puzzling issues of our time? This series of talks shines a light on solutions for this chaotic world, in order to gain clarity thanks to the experience of guest experts interviewed by David W. Callahan.



Everybody tells a story. But nobody tells it as we do. This podcast series collects facts and reports from ViaSarfatti25, Bocconi University's magazine. Listen to what professors and researchers have to say about the big topics in the fields of business, management, data science and politics.



Bocconi University's Rector Gianmario Verona meets top executives in the frontline in facing the challenges of the digital century. Bite-sized talks with plenty of insights. Stay tuned!



THINK DIVERSE is a fresh and deep look at the issues surrounding diversity and inclusion. The host, Catherine De Vries, is Dean for Diversity and Inclusion at Bocconi. In every episode, she picks the brain of one of her Bocconi colleagues about their research about diversity and inclusion topics.

www.unibocconi.eu/podcast/



Starting again from GenZ's values to build the new world

After a global pandemic that we have yet to overcome, despite the fact that we have pulled down our masks, and a world war that is now raging, regardless of the borders in which it is being fought, it hurts to think about the world we are leaving to our children and future generations. Instead of building their future we are destroying their present and shattering the memories of the best years of their lives.

After years of *Fridays for Future* and pride in fighting for the climate, our planet and the inclusion of all, after the hope that the Next Generation EU has given us to finally make the right ecological and digital transition, everything is in danger of stopping and even going backwards.

In a world that is objectively increasingly complex and interconnected, we need political leadership that is not only more competent, but also aligned with the values of the future, which are those of the young people in our classrooms. But politics is not enough, and all of us, starting with those in schools and universities who help young people to grow and develop, must play our part in building a better tomorrow, which will only be better if we start from the values inherent in our young people and help them to create the right skills to navigate in the complexity of the world.

As we were saying, digital and sustainability are the trajectories on which the world is moving. And they are also Bocconi's trajectories. In this issue we tell you about our commitment with concrete actions such as [the new Master of science in Transformative Sustainability](#), which will train manager-technologists capable of designing new, truly sustainable business models, and the Department of Computing Sciences, which has the task of bringing together different disciplines in a universal language.

Gianmario Verona
Rector



Executive chat /Mariangela Marseglia



Innovation, diversity and sustainability are the way forward for companies today highlights VP & Country Manager Amazon.it and Amazon.es

Executive chat / Alice Acciarri



Inclusion and innovation are important drivers for companies today, highlights General Manager eBay Italy and Bocconi alumna

FTxBocconi Challenge



Protagonists and highlights of the third edition of the Bocconi and FT initiative involving 200 young people from all over the world

Ukraine

From the earliest stages of the Russian invasion of Ukraine, viaSarfatti25 has called on the Bocconi community in order to comment and report on what is happening in the country, collecting in a focus dedicated to the war - here is an excerpt - the analyses of Bocconi professors and the testimonies of alumni and staff.

Università Bocconi supports the appeals of the European University Association and CRUI, the Conference of Italian University Rectors, in solidarity with the people affected by the war in the heart of Europe and is close to the Ukrainian academic community. The values of peace, dialogue, democracy and solidarity are indispensable and must therefore be constantly protected and disseminated.

The University is committed to supporting the members of its community and their families involved in this conflict and is committed to working, in coordination with Italian institutions, in particular the Ministry of University and Research, on concrete actions to support students and academics in conflict-affected territories.

[Bocconi invites members of its community to support the fundraiser for Ukraine organised jointly by the Red Cross, UNHCR and UNICEF.](#)



Rationalizing Putin

*by Massimo Morelli
and Umberto Platini*



War in Ukraine: Europe must face its security challenges

by Catherine E. De Vries



Sanctions targeted at members of Putin's elite could instill doubt about his conduct

by Livio Di Lonardo



Three tools to strangle the economy

by Carlo Altomonte



The geopolitical past of the present

by Andrea Colli



Violence against women in armed conflicts

by Graziella Romeo



Are economic sanctions blunt weapons?

by Paola Mariani



War in Eastern Europe: the afterlife of empire

by Tamas Vonyo



Would Ukraine breach its own Constitution if it dropped its NATO bid?

*by Justin Frosini
and Viktoriia Lapa*



What war in Ukraine means for cyber security in Europe

*by Greta Nasi
and Colin MacArthur*



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Teaching the ABC of

The challenge is to educate young people and older adults, and eliminate gender disparities in this area as well. For this to happen, financial literacy must become a policy objective in public welfare

by Francesco C. Billari and Francesco Saita @

Italy has long been characterized by low levels of financial literacy among countries with advanced economies, alas. In recent years, efforts have been multiplying to pay remedy to this, thanks also to the establishment of the Edufin National Committee, directed by Prof. Annamaria Lusardi, an international pioneer in the field of financial education, as well as a consultant for similar committees in the US.

Why is this issue so socially important?

Financial education is less about the ability of the average investor to interact effectively with their financial advisor, and more about the lack of understanding of a few basic concepts in a significant part of the population, leading to



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financial inequalities. This contributes to the absence of individual planning in financial, insurance and pension areas. For example, to the question "Investing €100 euros at 2% for 5 years will get you €110, more than €110, or less than €110?", only 23% of adult Italians answered correctly to the question, showing that they understand the concept of compound interest rate (2020 survey of the Bank of Italy). It is thus unsurprising that most have difficulties in assessing their ability to bear the cost of one's mortgage, to understand why it is necessary to start building a supplementary pension while you are young, and to save and invest efficiently to have guarantees of a sheltered future.

Teaching the basics of finance therefore has a fundamental social function: adopting a conscious and long-term approach to one's finances can help even weaker households withstand possible external shocks. This is all the more true for younger generations of Italians who, compared to their parents, find themselves having to face more arduous challenges: a pension system that is less generous, with a higher life expectancy; more refined but potentially more expensive health care; greater difficulty in mutual help between (fewer) children and parents, also due to greater geographical mobility; greater family instability, with separated women and men forced to deal with serious financial problems.

In Italy, a very important challenge is the financial education of young people. In recent years, the initiatives of foundations and institutions have multiplied, also thanks to the push of the Edufin Committee. The inclusion of even a limited number of lessons in basic financial education in the high school curriculum, in the context of civics or mathematics, would be decisive here. Even more ambitious would be the goal of reaching adults now outside the school system, who often do not have adequate basic skills; this is particularly true for women, with Italy unfortunately showing a particularly wide gender gap in financial literacy. As emerges from a recent study we are



finance

conducting with the research division of Consob, the Italian stock regulator, the problem for adults is aggravated by the fact that those with less financial knowledge are also less willing to learn, because they perceive less the potential benefits of knowing, or even if they perceive these benefits, they consider it too complex.

In order to create evidence-based financial education, it is important to design and implement focused interventions and rigorously measure their effects. This occurred in the context of various research/ action projects conducted by Bocconi (some of which are described at <https://bafficarefin.unibocconi.eu/edufin>), also in



PODCAST

The state of financial literacy around the world and its importance and relevance discussed in Story Scanner podcast by Annamaria Lusardi, Professor of Economics at George Washington University and Director of Italy's Financial Education Committee, and Francesco Saita, professor of Financial Markets and Institutions at Bocconi



collaboration with external donors or the Edufin Committee itself. In fact, research in this field must aim at redressing one of the most important, although neglected, sources of inequality and fragility in contemporary societies. Teaching the ABC of financial planning to even the most vulnerable citizens must therefore become a real objective for public welfare policy. For companies, it can become a key component of their social sustainability policies. ■



To learn how to save and invest, you n

The best way to approach financial issues is having a specific goal that needs to be reached, explains Annamaria Lusardi, Bocconi alumna and head of the Edufin Committee. This is the only way to understand the concepts of saving and investment. Just like the kids of a school did with their own vegetable garden

by Camillo Papini @

If not now, when?" one might wonder. With the economic crisis caused by the pandemic and inflation rising again, investing in the financial education of Italians has become more urgent, considering it wasn't adequate to start with. So, we'd better take action and exploit the upside of a pandemic which, like all periods of economic contraction, pushes citizens to have better knowledge and information on financial issues. Why? "Because every crisis leads many households to experience first-hand the costs imposed by low financial knowledge. And the data tell us that there is a correlation between financial knowledge and financial resilience, those who know more are better protected from the blows of the crisis," replies **Annamaria Lusardi**, Bocconi alumna, University Professor of Economics and Accountancy at George Washington

*ANNAMARIA LUSARDI
She graduated in Economics from Bocconi University and earned a PhD in Economics from Princeton University. Of her studies at Bocconi, she remembers her friendships, born there and lasting over time, and the monetary economics lessons of Professor Mario Monti, who was advisor for her thesis. "I owe to him my interest in the economy, the desire to continue my studies abroad and embark on an academic career," says Lusardi. "Studying at Bocconi was fundamental: my studies at the time and my job experience persuaded me that learning the ABC of finance is as necessary as learning how to read and write. I am proud to be able to work on these issues for my country".*

University, in the US capital, and head of the Italian government committee for the planning and coordination of financial education activities, set up in 2017. "Not only that, with rising inflation and a lot of savings remaining on bank accounts," adds Lusardi, "we see, today more than ever, how financial knowledge is necessary and useful." This is why the committee headed by Lusardi has for some time been fielding a series of initiatives aimed at everyone, young people and adults, men and women, ranging from Netflix-style web series to school initiatives, to the introduction of the Month of Financial Education, and from live events in public places to ad hoc contributions to the screenplay of *Un posto al sole* (A place in the sun), the most popular soap opera in Italy.

→ **Is the situation so serious?**

Yes, it is. We have faced a two-year pandemic. About a third of European families said they do not have sufficient means or savings to go even a single month without a salary. This situation requires not a step, but a leap forward. Furthermore, it should be emphasized, in the specific case of Italians, that the statistics indicate a low financial knowledge, both in absolute terms and compared to other countries. There is no familiarity with basic financial notions such as the risk-return ratio. Investing savings is too hard a decision for many. But the goal is not to make everybody a financial expert, but rather to convey the notion that those who have at least a basic grasp of financial knowledge live better.

→ **Yet our parents and grandparents didn't seem**

App, tutor and social networks: to each his own financial training

Many banking institutions now offer financial education, reaching out to various segments of the population, from young people to small and medium entrepreneurs, from freelancers to those who have founded a startup. But few banks set up programs designed to collect and measure the metrics of their interventions. Especially today that financial education is an established trend, the choice to publish short videos on social media like YouTube, "is a useful type of activity but does not enable the measurement of the impact generated. The financial education sector is ready, however, to kick off a new phase that takes the analysis of the results achieved into account. Only in this way, will it be possible to choose the tools and concepts best suitable for each specific segment of the population," says **Laura Penna**, Head of Group Social Impact Banking at UniCredit and Bocconi alumna. The Italian bank is bringing to high schools Startup your

*LAURA PENNA
Head of Group Social Impact Banking at UniCredit, she graduated from Bocconi in Business Administration*



life, a platform created by the Milanese banking group that offers a complete three-year program with co-planning opportunities and discussions with entrepreneurs. Ninety hours of training for each path, during which it is possible to evaluate the cognitive evolution of young students. However, there are many tools at our disposal, equally in use in Italy and abroad.

→ **What are these tools?**

In account school, financial education can go through playful ways such as simulating street markets or more complex commercial activities, depending on the age. Webinars can be organized with adults in order for them to acquire financial concepts, such as the distinction between fixed and variable interest rates and understand when one or the other is more advantageous. Finally, there are digital tools available to private households to control the management of the family budget.

→ **How do you choose the most suitable tool?**



Need to set goals

to have this kind of concerns...

Certainly, because the world was different: people invested in government bonds that guaranteed good returns, bought houses and public pensions were generous. Today, we are facing very low or even negative interest rates. Investment alternatives are many, diverse, almost disorienting given the breadth and variety of financial products and services. Nor should we forget the aspect of retirement, which we should care about well ahead of time. For these reasons, financial education has now become so important. And, under certain conditions, promoting a satisfactory level of knowledge is an attainable goal, a "mission possible".

→ What kind of conditions?

Deciding to invest in a series of educational initiatives, first shaping an economic mindset and then trying to encourage a more balanced set of investment behaviors. For example, a quarter of Italians claim not to set economic



goals in the medium to long term for themselves, according to data from the Edufin-Doxa Committee. If this is so, people will never start a savings and investment plan. If, on the other hand, people grasp the importance of setting goals for themselves and their families, things change. In this way, we do not fall back into the spiral whereby those who are ignorant of economic and financial issues not only do not invest, but not even start saving, or save less.

→ Are parts of society more exposed to the risk of financial ignorance?

There are certain categories we need to pay more attention to. I want to point out two in particular: young Italians, who are less prepared than their foreign peers. And for them the world of tomorrow will be very different from the world of yesterday. And I want to mention women. In Italy there are strong gender disparities in financial knowledge. And unfortunately, these gender differences start very early, as they are already present among 15-year-olds.

→ Parents open current accounts for their children at an early age. Is it a good idea?

Once the assessment is made on a case-by-case basis, the sooner you start the better it is. First of all, children are intrigued by money. We need to talk to them about money and financial decisions, to socialize them on these issues. In Paglieta, province of Chieti, for example, some classes of young students started by tending a vegetable garden, then moved on to selling the cultivated produce online and finally, through the school, they bought the vegetable plot by taking out a mortgage. The greatest benefit of this experience is that, when they grow up, they won't be held back by the fears instilled by low financial knowledge. ■

Starting from the three fundamental questions: who, what and how? If you talk to young people, you take stock of the communication channels most familiar to them, to instill the awareness that financial issues are important. If, on the other hand, we turn to the world of SMEs, the objective is to strengthen the skills on how to build a business plan or manage cash flows. Tutoring and mentoring activities are more effective in this case. An interesting example are the new apps, which however need users with advanced skills. I would add that there is another potential audience for financial education: so-called vulnerable individuals, those who are going through a difficult financial period or who have never received financial training.

→ In the later cases, it is not so obvious to be able to transmit technical information...

If you interface with an audience distant from the subject, it is essential to start by giving them the ABC of finance. Especially today with the boom in e-commerce and new formulas of installment payments, it is important that online consumers, young and old alike, know that these forms of payment can lead to over-indebtedness.



The concrete impact of Artificial Intelligence

Self-driving cars, facial recognition, image analysis for diagnostic purposes, customer profiling, and much more. The field of AI is experiencing a quantum leap thanks to the acceleration in computing capacity. However, the scientific understanding of deep networks and machine learning trails behind the development of applications, so that truly creative AI that builds its own representation of the world is still far in the future

by Marc Mézard @



By now, everybody should know that the recent progress of Artificial Intelligence (AI) is producing a dramatic impact on many sectors of our societies. AI has indeed obtained spectacular results that would have been considered impossible fifteen years ago. It can now process images automatically, identify faces, segment images and provide a semantic description of their content, opening the way to self-driving cars or trucks. Over the last decade, voice recognition and automatic translation have progressed more than in the previous five ones. Algorithms are competing with the best professionals at analyzing skin cancer symptoms or at detecting specific anomalies in radiology.

Recent AI algorithms have shown surprising ability to detect hidden correlations as well as relevant variables and patterns in massive sets of complex data. In some sense, they provide an efficient way to extend the basic tools of statistics to “large dimensional” spaces where one wants to identify many control variables and their relevance, using large data sets. Hence their growing importance in all types of profiling tasks, ranging from the recommendation systems for customers, to



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personalized medicine. For instance, applying AI to individual data that is being generated in massive developments of “omics” data in biology (analysis of the genome, of the transcriptome -the expression of genes-, of the proteins and their interactions), is prompting a major new step in the long quest of medicine towards more individualized diagnosis and treatments.

Indeed, the remarkable leap of performance achieved by AI in the last decade is well documented in some benchmark scientific problems. The most remarkable of them seems to be protein folding. Finding the shape of a protein (and therefore the organization of its active sites which governs its interactions with other molecules) has been one of the major scientific problems of the last few decades. And just last year, an AI algorithm, AlphaFold, won a world protein-folding challenge with such a decisive margin that many consider it as a true revolution in biology.

Although AI research started 70 years ago, its breakthrough in all these applications -and many more- only began in 2012, with the use of “deep networks” for image classification. The basic architecture of these networks is surprisingly simple. Taking inspiration from the organization of the brain,



THE COURSE

Artificial Intelligence in action (online program, in Italian), provides tools to design the roadmap for AI adoption and development in the enterprise by balancing strategy, technological, organisational and contextual elements

they consist of successive layers of “artificial neurons”, logical units that receive information from neurons in the previous layer, perform a simple computation and, in turn, send a few bits of information to the next layer. If, in the first layer, for instance, the network is presented with the image of a skin lesion, in the last one, it should tell you how likely this lesion is a cancer.

In fact, a modern “deep” network with hundreds of layers, analyzing a large image, can contain hundreds of millions of adaptable parameters ruling these elementary computations. To determine these many parameters, one uses machine learning: one trains the network by presenting a large “training set” of examples for which the results are known, and the parameters are adapted until the network performs the desired task on this training set. The generalization performance of the obtained machine is then tested on new data that the machine has not seen yet.

The paradigm of layered neural networks has been around for over 50 years. So far, it had not been successful on real-size practical applications. Its revival is mainly due to the increase in computing power, to the availability of very large -and labeled- data sets for training, and to many pre-processing and training tricks developed in the 2000’s.

In contrast, the scientific understanding of deep networks lags way behind. First, the learning process, in which one finds hundreds of millions of parameters by fitting data remains poorly understood. Even worse, successful fitting with that many parameters should lead to “overfitting”, namely poor generalizations on new data. At a more abstract level, what remains a fascinating scientific challenge is understanding how the information, stored collectively by the neurons inside each layer, becomes more global and more abstract when one goes deeper into the layers. Indeed, well-trained deep networks perform amazing tasks, and one knows every single detail of their artificial neurons. In a sense, they become neurobiologists’ dreams, “brains” in which one knows all neurons and the

efficacy of all synapses... Yet, despite this detailed knowledge, we do not understand how the final task emerges from the collective behavior of many neurons; furthermore, we cannot explain it in simple terms. Solving this challenge will need inputs from statistics, information theory, computer science, theoretical physics, probability theory, computational neurosciences among others...

On top of these scientific questions, the fast AI technological revolution challenges the organization of our societies and poses many ethical questions which call for new regulations. However, as far as global “intelligence” is concerned, these machines have not made much progress. They can achieve specific tasks, characterized by simple answers, yet they are far from building a representation of the world, or from any kind of creative reasoning. In science, deep networks and new data-science algorithms have become extremely useful additions to our toolbox, comparable to the appearance of numerical simulations a few decades ago. However, these machines cannot replace modeling, i.e. building a concise, workable and predictive representation of the world. Contrary to some bold claims, they will not kill the scientific methods that we have been using for five centuries. Rather, they will help it. ■

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machine learning and
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In 2016, he received (with M.
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from the American Physical
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THE BOOK

The era of augmented reality, artificial intelligence and machine learning is here, giving birth to a surprising new planet recreated and populated by entities, experiences and ecologies generated through simulation. Cosimo Accoto, a philosopher of technologies, recounts this new world in *Il mondo in sintesi. Cinque brevi lezioni di filosofia della simulazione* (Egea, 2022, pp. 192, €20, in Italian).





Computing sciences have a home here

At Bocconi there's a new department that does research at the intersection of computer science, theoretical physics, applied mathematics, artificial intelligence, machine learning, and computational neuroscience. Talents from all over the world have come to work here and Riccardo Zecchina is at the helm

by Emanuele Elli @

Work is in full swing on the third floor of the Via Roentgen building. After moving boxes and setting up new offices, the staff of the newborn Department of Computing Sciences is gathered here, in a structure that combines teaching and research at the crossing of computer science, theoretical physics, applied mathematics, artificial intelligence, machine learning and computational neuroscience. Leading the team, which in its initial roster has 5 full professors, 2 associate professors, 11 assistant professors and 5 lecturers, is **Riccardo Zecchina**, an engineer who graduated from the Polytechnic of Turin, currently Full Professor of theoretical physics and Bocconi Vodafone Chair in Machine Learning and Data Science.

→ What are the objectives of such a department in a social sciences university?

Bocconi has been expanding towards STEM subjects for some time. It is part of the University's strategic plan and very significant skills have already developed regarding the use of these "hard" sciences in the social and economic fields. The convergence between economics, computational sciences and social sciences is a fact occurring in today's context, and having acknowledged this, Bocconi seeks to immediately place itself at the academic forefront. The first objective is therefore to do research at the highest possible level and, at the same time, to interact with other disciplines. It is from the interaction with economists that new knowledge will arise: our task is to create the

conditions for the interaction between data science and social science to be as fruitful as possible.

→ Which research areas is the new department bound to explore?

Computing sciences encompass different fields, from computer science to modeling science, computational neuroscience, and computational social science. These four pillars converge in machine learning and artificial intelligence. Within this framework there are topics such as algorithm theory, optimization, natural language processing, game theory, computational aspects of data privacy and cybersecurity, and quantum computing.

There is also the area of digital humanities, where we will do applied research on the possible uses of AI in various branches of economics, from accounting to finance. Finally, we will try to carry out research in the field of life sciences related to computational biomedicine and image processing.

→ Which talented resources have you managed to attract to the new structure?

The first arrival was from Berkeley, Luca Trevisan, a theoretical computer scientist of absolute excellence, a reference for the global community. Alon Rosen instead comes from the Weizmann Institute for Sciences in Israel, and is one of the leading experts in cryptography and security. We have with us Marc Mézard, until recently director of the ENS in Paris, who will give an essential contribution on machine learning, while Francesca



Buffa comes from Oxford and deals with algorithmic learning in computational medicine and in particular with respect to cell networks involved in the regulation of tumors. Among younger researchers, I would like to mention Dirk Hovy, already at Bocconi, an expert in natural language processing and Laura Sanità who will join us in September, specialized in optimization and operational research. Almost all of them have ERC grants, a certification of international research excellence. There are also many young assistant professors in whom we place great trust and for whom we harbor great expectations.

→ *What contribution will you make to teaching?*

We would like to help insert more computational knowledge into all degree programs, by hybridizing university training and thus responding to the very strong demand from the professional job market. We have already given birth to a three-year undergraduate degree, [the BSc in Mathematical and Computing Sciences for AI](#), which is enjoying great success and is a purely STEM course, i.e. it is classified as an applied mathematics program. It is an interdisciplinary path that provides students with a very solid methodological background but also gives access to more traditional Bocconi graduate programs.

→ *Considering the appeal for young people of the disciplines you teach, you will soon be in great demand. Aren't you afraid of an overlooking effect?*

Already now we have plenty of requests and probably some of our young researcher have taken on more commitments

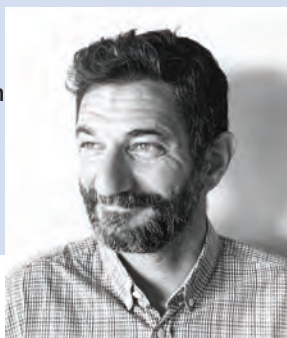
on the supervision of theses than they should have, but everything will be brought up to speed. However, we must clarify to the students that we do not teach technology, we describe a series of conceptual, methodological tools through which they can exploit the digital technologies in every field. Our aim is to create a new kind of "Bocconian", who knows how to create models, interpret tools and create new ones to stay up to date. It is not a technology transfer, but an understanding of conceptual methods that requires a lot of student effort and gives long-term benefits.

→ *Have you also thought of initiatives open to external users?*

There is a huge problem of continuing education in companies for many of our subjects, but it is still premature to think about it. Today we must aim to bring the best scholars to Milan for research and teaching. [In addition, together with three other Milanese universities - Milan Polytechnic, University of Milan and University of Milan Bicocca - we have created a joint research center associated with the European Laboratory for Learning and Intelligent Systems \(ELLIS\)](#) which is developing many interactions with the industrial sector. I believe it is an important social message because it means that there is attractiveness in sectors such as information technology, cybersecurity or machine learning, and this is important for the entire Italian social and economic fabric. In short, we are training many young people who will be precious resources for companies. ■

Qi4M Tailor-made financial products

To create financial products from scratch tailored to every type of investor, to do it in a simpler and more flexible way over time, but above all saving first and earning later thanks to technology. This is the goal that many startups in the financial world are aiming at today and that Qi4M has been applying for four years on the market through the use of a technological and service platform, based on proprietary algorithms. The difference with other more traditional operators? "We do not distribute investment products designed by others, often designed outside Italy and intended to meet different needs. We are a digital factory and we can directly create, thanks to our robot index, personalized and transparent financial products in the pursuit of objectives," says [Vittorio Carlei](#), co-founder, CEO and head of R&D at [Qi4M](#), which looks to close 2022 with approximately 1.2 million in revenues.



Thanks to Artificial Intelligence (AI) and machine learning engines, some intermediate phases of the process are reduced (for example, those of asset allocation and asset management merge). But in particular, "better results are obtained for customers when avoiding any kind of distortion, dictated both by unconscious errors and by conflicting strategies. This is how, overall, the degree of transparency that our algorithms follow allows us better communication and explanation of the decisions made to the investors themselves," Carlei points out. "This happens both by addressing a b-to-b audience and, even more so, a b-to-c audience, a segment in which we are entering with greater determination." It is no coincidence that the new offer of the startup developed in the accelerator of Milan's Bocconi University, [B4i-Bocconi for innovation](#), is part of the first actively managed certificate, based on robot index, listed and affordable. Meanwhile, however, the evolution of Qi4M continues and its staff now numbers 15 people, including the team dedicated to research & development, all under 30 years old.



If the singer is a robot

AI has also entered the music market with a vengeance. And if, on the one hand, algorithms are essential for profiling listeners or selecting emerging artists, on the other hand, AI artists risk undermining the emotionality of musical enjoyment

by Camillo Papini @

There are opportunities but also unknowns in the increasingly widespread use of Artificial Intelligence (AI) in the world of music. Then, it also happens that some limitations can turn into opportunities. The recording industry knows very well how major technological shift can upend its business, having already gone through various evolutions, from the age of peer-to-peer filesharing to current streaming platforms. For some time, AI has been creating virtual artists who constantly interact with fans, demonstrating that virtual agents know the fans' names and habits and therefore make them feel closer to their idols. The AI knows how to predict what a user is likely to want to listen to but also knows the exact moment, and the probable why, to interrupt a song to switch to another. "To tell the truth, Artificial Intelligence also composes music and the second AI song contest has already been held, an international competition supported by Eurovision and reserved for



*ELEONORA BIANCHI
Graduated from Bocconi in Management. Of her period of study, she remembers above all that "those years were intense, forced with great enthusiasm, thanks to which I was lucky enough to build a network of acquaintances that still accompany me, both from a personal point of view and a professional one. The mindset acquired at Bocconi was crucial to approach the world of work, where I still try to maintain the same enthusiasm and daily desire to learn, which are the bases of success for any Bocconi student and for any manager."*

musical compositions born from algorithms", says **Eleonora Bianchi**, Head of Digital Services & Consumption at Universal Music Italy.

→ **So robotic creativity is what the future has in store?**

Excessive use of automated composition involves risks, such as losing part of the authorship and emotionality associated with listening to a song. From the point of view of production, then, it could reduce the market shares of record companies, with repercussions on employment levels, and race-to-the-bottom effects for artists. A virtual rival can publish a song at a lower cost. However, I believe that the human role will remain.

→ **Why?**

For instance, when two rappers for some reason come into conflict with each other, if AI continues to offer them in the same playlist, the two artists and their respective fans may not like that and choose not to use the platform anymore. If anything, I would like to make a better use of new technologies to expand listening opportunities. For example, enriching songs with more metadata. The playlists at the top of the preferences are those for special occasions, which answer questions like "I want music to relax" or those related to a specific event. Given the great impact of the Sanremo festival, the Sanremo tag has gained great relevance. The playlist dedicated to Sanremo songs entered the Top 10 in the world on Spotify and Amazon Music.

→ **What information obtained with AI can, on the other hand, help record production?**

Universal Music Italy and other record companies have internal divisions of data scientists, who work on the information provided by streaming platforms to better profile who listens to what. For record labels, these data are useful to draw a whole range of important information both about their artists and to find new singers among emerging or independent ones. We are talking about a form of scouting that, every day, analyzes 200-300,000 names.

→ **And what are you interested in knowing about your artists that you don't know already?**

We can predict the average lifetime of a song and decide, accordingly, when to launch a new song by the same artist. We use big data to plan an ongoing calendar of releases in what is a fiercely competitive market.

Not just Alexa

Artificial intelligence in retail, logistics and packaging, even to prevent counterfeiting. And in the future, as explained by alumnus Giorgio Busnelli, Director of Consumer Goods at Amazon.it and Amazon.es, there will be more and more integration between the physical and the online experience

by Camillo Papini @

Artificial Intelligence in retail makes for a more pleasant shopping experience. AI has entered the homes of Italians in the form of the voice assistant but above all in companies, to support logistics to optimize transport, product deliveries, and packaging in particular. AI can be applied to different links of the supply chain, reaching to the core of the business: the product itself, the one that is delivered. How? In terms of anti-counterfeiting, thanks to machine learning algorithms that guarantee that customers receive authentic products. "At Amazon we are experimenting with different uses for AI, from the Amazon Go store, which uses computer vision to eliminate queues at checkout, to Alexa, our cloud-based voice service," confirms **Giorgio Busnelli**, Director of Consumer Goods for Amazon.it and Amazon.es. "We also use AI in logistics. The goal is to make 50% of our shipments

emission-free by 2030 and, thanks to AI, we continuously optimize the allocation of products within our network as well as delivery routes and van loads. We are also able to choose the best

*GIORGIO BUSNELLI
Is director of consumer goods at Amazon.it and Amazon.es. He graduated in Economic and Social Disciplines from Bocconi University. "During my time at Bocconi I had the good fortune to meet professors and classmates with whom I could discuss, debate and have always an enriching exchange of opinions", underlines Busnelli. "I believe that Bocconi was a great fortune for me and an important formative moment for my personal and professional growth. It was thanks to Bocconi that I entered the world of work, starting from strategic consulting with an internship at McKinsey, where I worked for 17 years before joining Amazon".*

packaging options for shipments", continues Busnelli, "by identifying which products do not require additional packaging and which ones are suitable for flexible packaging".

→ **What are the main delicate points of these procedures?**

Our solutions based on artificial intelligence are the result of a machine learning activity: this is the most delicate point, in the sense that it requires work and attention. For example, given the dynamism and volumes of our catalog, it would be impossible to choose the appropriate packaging for each item, using manual inspections. For this reason, machine learning-based approaches allow us to determine the best quantity and type of package. That said, human contribution is and will remain central to designing, governing, inspecting and maintaining automatic processes.

→ **How do you measure the economic return, if any, on technological investments in environmental and energy sustainability?**

Investing in sustainability and collaborating with all the players in the supply chain brings a positive return to business, customers, the environment and communities. It would be shortsighted to address the problem using a private return perspective. In 2019 we co-founded the Climate Pledge, a commitment for companies to achieve zero CO2 emissions by 2040, ten years ahead of the Paris Agreement. This translates into major investments to bring a company as physical as Amazon to achieve carbon neutrality. Therefore, for example, we purchase renewal energy produced from non-fossil power plants with the aim of reaching 100% of our needs by 2025, and we also invest in start-ups to accelerate the development of clean tech.

→ **What are the next areas of application of AI for you?**

At Amazon, I am responsible for the consumer goods category and one area where I think AI may have interesting potential, is the use of augmented reality in retail, to better integrate the physical and online experience. Examples are solutions such as the Virtual Try On, through which customers can virtually apply a cosmetic product on themselves, or 3D animations to help them select furnishing accessories.





The algorithms that help you with branding

Not only can they provide tailor-made services, but they can also make the social commitment of the company clear, for example by showing moment by moment savings of carbon dioxide. This is what data allows you to do, as explained by alumna Laura Battini, Head of Digital Channels and Loyalty at Vodafone Italia

QUICK ALGORITHM

How I democratize technology



To make their production more efficient, thanks to big data, is the dream of many companies. But then we come up against the need to invest in technological platforms suitable for exploiting a huge amount of information, and in data scientists who follow the process. In order to enable even companies with limited budgets, or without specialized professionals in house, to optimize the

management of physical assets, from production machinery to corporate real estate, [Quick Algorithm](#) has decided to support the technological democratization of the market. Its Scops.ai. Proprietary is a cloud-based software that not only analyzes big data from sensors and different sources but also manages to monitor those generated by human maintenance activities. "Then it brings together all the information in a single interface for immediate use," explains [Jacopo Piana](#), founder and CEO of the startup born in February 2018 and incubated by [B4i-Bocconi for innovation](#), acceleration program of Bocconi University. "With Scops, the suggestions coming from Artificial Intelligence (AI) supported by machine learning algorithms, are within the reach of both management and operational staff. All this while addressing sustainable costs, also designed to be pay-as-you-go." The less data is analyzed, the less you pay. The advantages achievable thanks to this declination of AI range from the reduction of cases of plant downtime (-30/-50% on average) and detection of any anomalies in advance to management of energy supply capable of predicting fluctuations and, therefore, resulting less economically burdensome (-15/-20% on costs incurred). "Without forgetting that, as a final result of a smarter management of physical assets, the life of a machine tends to be extended by 20-40%," concludes Piana who closed the first round of financing last summer with a capital increase of one million euros.

by Camillo Papini @

Algorithms are useful for creating an offer of personalized services for the individual customer, but they also serve for branding, to give substance to the values of social commitment around which a brand has been built. Providing tailor-made services is important for all sectors, especially for the telecommunications sector where many services such as messaging and digital security have been added to the main service of voice communication, progressively over time. This is how modulated offers were born, with different benefits from user to user but also the promotions for special occasions such as Valentine's Day. It is not always said, however, that "thanks to the data we can also calculate how much carbon dioxide we get to save, up to that precise moment, for example through our European network powered only with electricity from renewable sources since July 2021," explains **Laura Battini**, Head of Digital Channels and Loyalty at Vodafone Italy. "We communicate that information to consumers thanks to a digital meter, so that they know how much we do every day, together, for the environment. With algorithms, therefore, we are able to put comprehensible and concrete content into statements that otherwise would risk seeming only theoretical."

→ **Let's start from the services. When do you start profiling the user with algorithms?**

It is a process that follows the entire path of the user as our customer. So we can proactively respond to your needs as they grow. Starting from onboarding, we suggest to users answers to the needs and services that may interest them specifically, to complete and improve their experience. For example, while always respecting

privacy, if it emerges that someone does not consume all their traffic, perhaps we offer them experiences and gifts more suitable for a person who leads a more offline life. Artificial Intelligence allows us to quickly process and optimize a large amount of data, thus extracting more detailed information on what the individual customer expects from us.

→ **What is another concrete contribution of new technologies to shape the society of the future?**

According to a recent study by Vodafone (The Connected Consumer 2030), connectivity and smart technology will radically transform the way we live and have a strong impact on various sectors, from healthcare to smart cities to sustainability. And it is precisely with technology that it is possible to drive this transformation.

→ **And how does the consumer experience the use of algorithms?**

As for the interaction with forms of Artificial Intelligence (AI), I would say when, for example, our Digital Assistant Tobi manages to quickly solve a problem. But, even when Tobi does not know how to respond and passes the communication to a human operator, they are satisfied because Tobi shows the operator what the nature of the problem is, so the user does not need to

repeat everything from the beginning. However, I would stress that the application of AI always opens up new scenarios, new fields of application and relationships with consumers. It is a challenge also and first of all for us who work in marketing and we must keep our skills up to date.



LAURA BATTINI
Graduated from Bocconi University in International Management. During her studies she appreciated above all the international environment, the networking opportunities and the possibility of combining her academic studies with involvement in other initiatives, such as the birth of Bocconi TV. Among the tools she acquired during her studies are analytical and problem solving skills that have allowed her to adapt effectively to different and challenging situations, and the awareness that you must never stop working on your education.

MINE CRIME Tell me where you live and I'll tell you how safe you are

It is a topic on the agenda in newspapers but also one of the first thoughts that those who want to buy a house in a new neighborhood or are about to start a business have: what is the level of urban degradation in that area? Is it safe to move on foot or by means of transport, buses or taxis? In Italy there is no single archive consultable by companies and individual which can provide quantitative, and therefore objective, data on the problem:



the information in the hands of the police is not available to the public. Yet, there is a series of open sources, from the media to specialized platforms to reports shared by the Police or Carabinieri, which can be processed and made known to private individuals. "Mine Crime scans and analyzes precisely this set of information from open and verified sources, in the field of micro-crime. Our software thus comes to create in almost real time, with a delay of up to 24 hours, a database that puts in order every offense according to date, time, place and type," says Giacomo Salvaneli, crime analyst but above all co-founder and CEO of the homonymous startup [Mine Crime](#), launched in december 2020 and grown in the accelerator of Bocconi University [B4i-Bocconi for innovation](#). After transforming big data into risk indicators using Artificial Intelligence (AI), the newborn company also offers among its services the publication of reports, the design of crime prevention events and training courses. The crawler software, which moves by scanning the web, works on about 60% of the information that is also in the possession of institutions (especially with regard to crimes against important assets) and comes to process 40% more data in the hands of law enforcement agencies about economic crimes, violence or drug dealing, snatching, and prostitution. Processing that, without the use of AI, would be expensive for companies and prohibitive for citizens.

Bocconi

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Now more than ever.

Today, knowledge, innovation, cultural exchange, ideas, vision matter like never before. These have always been Bocconi's values. They are part of our history and they represent the way we can provide answers to a completely new world. Together.

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Check to Narciss

A study shows that shareholders voted against CEOs who displayed narcissistic attitudes during the pandemic by not cutting their own salaries in response to the pain felt by their companies

by Miles Gietzmann @

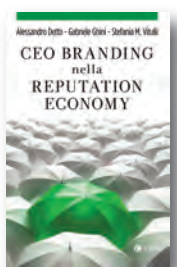
The 1985 hit pop song “When the going gets tough, the tough get going” sung by artist Billy Ocean could be seen as applying to corporate life since the pandemic hit worldwide economies in early 2020. Chief Executive Officers, normally surrounded by coteries of informed advisors and consultants, were previously used to taking carefully reasoned decisions supported by thorough data analyses. However, with the advent of the pandemic the possibilities for reasoned decision making evaporated under a cloud of political indecision and inconsistency, on-off lockdown variant cycles and widespread supply chain disruptions. In such an extreme setting, CEOs have been tested to the extreme. In the research discussed below it is proposed that the pandemic helped expose hidden personality traits of individual CEOs that previously were hard to observe during more benign times.

In terms of critical personality traits, Stanford academics O'Reilly and Pfeffer have recently argued that CEO leadership contests may be populated by “extraverted and interpersonally skilled, with high self-esteem”, overly self-confident, attention demanding self-interested narcissists, “even though there is little evidence that they are more competent than less narcissistic individuals”. They argue the reason narcissists rise to positions of power in organizations is because they are often skilled at organizational politics, even though such traits may have “deleterious effects on both their companies and the people who work for them”. Given outside shareholders rarely see CEOs engaging in organizational politics it is hard



THE BOOK

If companies are to become drivers of sustainable change, CEOs must also be able to transform themselves in order to contribute to a solid reputational space. How to achieve this? *Ceo branding nella reputation economy* by Gabriele Ghini, Stefania Micaela Vitulli and Alessandro Detto (Egea, 2021, 216 pp., €26, in Italian) offers a theoretical and practical guide to successful reputational models in the era of sustainability.



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for shareholders to perform an opinion on CEO narcissistic tendencies. In research on the pay of U.S. CEOs during the pandemic with co-authors Denis Alves (Norwich Business School) and Bjorn Jorgensen (Copenhagen Business School), we investigated whether, when the “going got tough”, previously difficult to observe CEO narcissistic tendencies could be identified. By comparing how different CEOs dealt with imposed pay cuts on employees and dividend suspensions for shareholders, the three authors were able to define new pay groupings for the CEOs of companies that were negatively impacted by the pandemic. Some CEOs responded by sharing the pain and voluntarily offering to take no pay in 2020 or alternatively, taking a large pay cut. However, some CEOs, consistent with a narcissistic sense of entitlement, did not share in the pain. The research investigated how shareholders cast their votes at annual AGMs in response to dividend suspensions and CEO voluntary pay cut decisions. Even though



SSUS

dividend suspensions were costly to shareholders the research found that CEOs did not attract negative voting at the AGM if they had voluntarily proposed a significant cut in their own pay immediately following the onset of the pandemic. However, those CEOs that thought they did not need to share the pain received negative voting responses even though the dividend reductions that shareholders experienced were broadly similar whether the CEO volunteered for a pay cut or not. There could be multiple reasons for this. The one proposed in the research paper is that shareholders revised beliefs that it was more likely that CEOs that did not volunteer for a pay cut during the extremely troubled times were narcissists pursuing their own self-interests and not necessarily taking decisions in the interests of the share holder community. ■



THE PAPER

Show me the money-cut: shareholder dividend suspensions and voluntary CEO pay cuts during the COVID pandemic, by Denis L. Alves, Miles B. Gietzmann, Bjørn N. Jørgensen

To grow or not to grow? This is the question



The fear of losing control of the family business slows both investment and raising new capital. An ongoing study demonstrates the effectiveness of the introduction of TVRs, voting rights based on the ownership of shares, and provides important indications to regulators who are discussing the adoption of CEMs, mechanisms for strengthening control

by Claudia Imperatore @



Family-controlled and founder firms are common and economically important in several countries around the world. In the U.S. families control more than 55% of public firms. In continental Europe, the percentage is even higher, especially in countries such as Italy, Spain, and France. A key challenge for family owners and founders is the so-called “control vs growth dilemma”: as outside investment can dilute family control, family owners might prefer to under-invest and forego valuable growth prospects. A potential solution to this dilemma is the adoption of control-enhancing mechanisms (CEMs) (e.g. dual-class shares, shareholders’ agreements, pyramids) that enable family owners and founders to raise new equity and invest without relinquishing control. Alphabet, Facebook, and Lyft are just some examples of firms that adopted this strategy at the moment of their IPO. Yet, the implementation of CEMs is controversial as dominant owners, like the family, can use them to consolidate their control at expense of minority shareholders. Indeed, CEMs represent a deviation from the optimal corporate governance principle of one share – one vote. Given that, their introduction is under debate in many countries. After having lost the listings of local firms such as Alibaba, the Hong Kong Stock Exchange and Singapore Stock Exchange have recently changed their rules to allow dual-class structures of IPO firms. In Europe, an increasing number of countries are introducing tenure-voting rights to incentivize founder- and family-controlled firms to go public and raise external equity. Following this trend worldwide, the Italian regulator introduced tenure-based voting rights (TVRs) in 2014 with the D.L. 24 June 2014, n.



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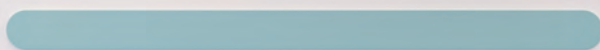
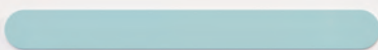
91 (Competitiveness Decree). TVRs adoption is not mandatory as firms voluntarily introduce them through a modification of corporate charter that has to be approved by the AGM with a qualified majority of two-thirds. Notably, Italian TVRs are not a distinct class of shares, but rights that any shareholder can obtain if they hold the shares for at least two years, and are lost if the shares are sold or transferred. In the period 2015-2019, 49 listed Italian companies adopted TVRs with a positive trend over time. The majority of them are family firms with a relatively fragile control (i.e., family ownership lower than 50%).

Notwithstanding the concern that family owners can use TVRs to enhance their control at the detriment of minority shareholders, in the study “Do tenure-based voting rights help mitigate the family firm control-growth dilemma?” with Prof. Peter F. Pope (Bocconi University) we find that family firms with TVR under-invest less and raise more external equity. Because TVRs strengthen the family control over the firm, family owners are less reluctant to invest and raise new equity. Thus, TVRs can be an effective tool to solve the “control-growth dilemma” and foster investment in family firms. Notably, we document that family owners use TVRs to pursue profitable investment as firm value is higher after family firms adopt TVRs. Above all, family firms with TVRs distribute more dividends and increase the percentage of directors representing minorities on the board of directors. Anticipating that TVRs may dissuade outsiders from supporting their strategic choices, family owners use mechanisms like greater dividend payout and stronger board representation to attract and persuade outsiders to invest in their firms. Hence, although TVRs imply a deviation from the one share-one vote principle, outsider investors can also benefit from their adoption. This is important for regulators that are currently discussing the adoption of CEMs: the benefits of CEMs hinge upon the extent to which CEMs expose minorities to the risk of being exploited by dominant owners. This risk is reduced in the case of Italian TVRs as they need to be approved by a qualified majority and any shareholder can obtain double voting rights as long as the holding requirement is met. As a result, the TVRs’ adoption is beneficial for both family owners and outsiders. ■



THE COURSE

La Governance in azione, in Italian, gives those with governance responsibilities the tools to get the most out of their system of governance and control bodies and to understand what changes to introduce and how to implement them.





The influencer's tone of voice

The limits of collaboration strategies between brands and social media stars. And how to overcome them

by Anwesha De and Beth Fossen @

With the rapid rise in the number of social media users and the increase in the amount of time spent on social media, social media platforms present brands with a more dynamic and interactive platform to engage consumers. Brands are responding to these changes in online engagement by investing heavily in social media. According to a recent CMO survey, social media investments by brands accounted for 11.4% of their marketing budget, but the contribution of these investments to firm performance has been stagnant since 2016. The misalignment between social media investments and firm performance despite macro changes in consumer behavior could indicate that brands haven't mastered effective strategies for driving engagement. While research in this area highlights the importance of social media influencer marketing for marketers, research on the consequences of such brand-influencer collaborations is still nascent. In our research, we focus on the influencer's content strategy in the brand-influencer relationship. While such a change in content strategy by influencers may be driven by the motivation to increase engagement, it may potentially have severe repercussions.

Using data from 75 social media influencers across three industries, we investigate the impacts of brand-influencer collaborations and changes in content strategy on engagement. Our results also show that when influencers mention brands, they are more likely to deviate from their typical content in terms of the arousal expressed in the language. Interestingly, we find that this strategy may further reduce engagement with branded content. Specifically, changing the arousal of branded content further reduces engagement both in terms of the number of shares and replies. When influencers



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change the arousal of the content by one standard deviation, we find that posts with brand mentions garner an 8% reduction in the number of shares and an 11% reduction in the number of replies. We probe two potential mechanisms that could be driving this result. Do followers respond negatively to changes in content strategy by influencers because it seems (1) inauthentic and/or (2) overly promotional. We find some evidence that the second mechanism may be driving the results we see.

Our research makes two key contributions. First, our work is among the first to detail how influencers change their content when they post about brands. Importantly, we show that changes in content strategy through the change in arousal of the branded posts hurt engagement. We show that this may be the result of changes in content strategy coming across as overly promotional. These insights are particularly valuable as our results show that influencers commonly deviate from their typical content strategy when posting about brands, which our analyses suggest is a sub-optimal strategy.

Second, while influencer marketing is exploding in popularity, we identify some of the limits of this strategy that can help both brands and influencers better understand this medium. Chiefly, branded posts by influencers garner fewer replies, and influencers with more followers and followers are less likely to mention brands in their posts. Thus, we suggest that influencers engaging in fewer or less frequent brand collaborations are more likely to maintain their engagement levels. Additionally, despite the potential attractiveness of popular influencers, such collaborations may prove to be counterproductive for brands not only in terms of the fewer brand mentions but also in terms of lower engagement. ■

A school that projects you into your future

The Bocconi Graduate School has a double soul: it completes higher education and addresses the world of professional employment, says Dean Antonella Carù. Her advice to students? Keep an open mind, question yourself, solidify your skills, but also leave room for the unexpected

by Emanuele Elli @

One foot still in the classroom and the other already in the world of work. The Bocconi Graduate School lives in balance in these two realms, simultaneously fulfilling the task of completing the education of students and at the same time directing them towards their first professional experiences. For eight years, **Antonella Carù**, and a leading expert in marketing and management, formerly a Bocconi student and researcher, has been leading the team that accompanies students in graduate training. Visiting professor in various universities around the world, today she complements her teaching at the University and at SDA Bocconi School of Management with her role of Dean of the [Graduate School](#).

→ **Theory and practice, training and professionalization, the need to study and the desire to test oneself on the job, how does it all hold together?**

Our Master of Science offers a very structured first-year curriculum, common to most programs and during which students consolidate knowledge. This is followed by a second year where everyone has to build their own curriculum by choosing from the experiences and skills they want to deepen. Some of our competitors offer courses that are more compressed in terms of time, it is true, but I believe that the two years are a value to be defended because they guarantee a truly rich and stimulating program. It doesn't mean that young people arrive later in the world of employment; they all do a compulsory internship of at least three months and there are opportunities for continuous interactions with companies and institutions. In fact, our extraordinary placement results confirm the validity of this model.

→ **Students, however, tend to have a natural hurry to move quickly from the classroom to the office..** That's true. This is why we try to explain to them that, in a

ANTONELLA CARÙ
Alumna Bocconi, Dean of the Bocconi Graduate School. "I chose economics and Bocconi, imagining my future in a company, but when I had the opportunity to working at the University I decided to take it, and became passionate about it. About marketing, which was not my specialization, and teaching and research, which were not in my plans! My university years as a student were wonderful, and even the courses I loved least helped me understand the importance of giving yourself time to judge and choose. In my role as a Dean, I happen to go back to that period with my mind and recall the things I had underestimated and the things I had overestimated: I try to encourage students to look around, and fully grasp the richness of the many things that the University offers and the value of our community".

constantly changing world, it is necessary to have solid skills, but above all open-mindedness, the ability to continue learning, to question oneself. In this, the university years are fundamental because they allow graduate students to take risks, to experiment, while remaining in a relatively protected environment, while developing relationships with their peers which will be fundamental in the future.

→ **In your opinion, what is the ideal time to include an internship or study experience abroad in the curriculum?**

We have not deliberately chosen a predetermined sequence of experiences, precisely because the second year of the Master of Science must be built by everyone freely. It is important, however, that they start thinking about it right away, already in the first semester of the first year, and start to sift through foreign universities to go to on exchange, or the companies to focus on for the internship. How you compose your curriculum is already an early challenge on how you will build your career. There are immovable milestones: the exchange program, the compulsory internship, the elective courses and the thesis, but the mosaic that comes out of these elements is always very personal and reflects the responsibilities that the student decides to take on herself or himself.

→ **Which, among the proposals of the Graduate School, would you have liked to have also been there in your years as a student?**

The [CEO Connect program](#) we launched in October is something that would have really interested me. Already then I was wondering what would be a day like next to the CEO of a large company and when the CEO of Facebook, Luca Colombo, had the idea of involving a group of CEOs to act as mentors for some students, it seemed to me an excellent initiative. Students can sit next to them and talk to them not only about their training choices but about



the perspectives of the respective industries, a considerable opportunity. Even CEOs are happy with the experience because they are enriched by the contact with Generation Z, which is subjected to a vast array of stimuli but also able and quick to grasp them.

→ *Speaking of Generation Z, what are the expectations with which these young people present themselves in orientation events?*

Most already have an idea of the path they want to take. Their expectations are greatly influenced by the opportunities offered by the world of work, but also by interests and passions, often matured during their three years as undergrads. One thing they always appreciate are the testimonials of our young graduates, not too far from their university days, but already inside the world of professional employment. My recommendation is that, while they keep one eye on the world of work, they do not lose sight of their attitudes with the other.

→ *How much room is there to indulge your personal proclivities in your studies?*

In a course of study there are exciting courses and others that are maybe less so, but it is the ensemble that gives roundness to one's preparation. You cannot proceed by exclusion, doing only what interests you: the ability to choose must be based on knowledge of the alternatives. Furthermore, it is true that in graduate school we are already in a context of specialization, but I tell the students that it is better not to close one's perspective too much and let oneself open to be surprised and be led where one might not think. The most important goal is to identify a rich training path that helps you orient yourself towards a job that makes you feel good not only professionally but also at a personal level: this does not happen where there is either too much rigidity or laxity with respect to one's own aptitudes.

→ *Does the decision to start a new program of*



studies take place more by looking at student demand or employment demand?

By looking at both. The world of work gives clear signals, and young people catch them quickly. We must interpret these signals and take a long-term view. In recent years, the graduate school has implemented the university's far-sighted choice to expand its presence from our traditional areas of study to two new areas of great interest for the future, computer science and political sciences, by activating two new graduate programs (Data Science and Business Analytics, and Politics and Policy Analysis) and hybridizing these with other MSc degree programs. We have also launched two joint degrees with the Politecnico di Milano confirming the importance of opening up to interdisciplinarity to tackle complex issues: an MSc in Cyber Risk, Strategy and Governance, a specific but highly-in-demand skill, from our observation of the market and the needs of companies, and the new MSc in Transformative Sustainability which combines training in management and governance with technology verticals on the environment, materials, energy.

→ You have directed two Bocconi schools (previously the Undergraduate School and now the

Graduate School) since 2012. How have you seen students change a lot over this decade?

Today I find them more open, quick, very casual in the use of technologies, sometimes frightened by uncertainty - and the years we are experiencing certainly contribute to explaining this - and difficulties, as if they were something unexpected. The years at the university must also be used to learn how to deal with failure or disappointment, even if it is only an exam that did not go as it should have. I always tell young people to prefer the enrichment of experience to grade point average, but in this not much has changed over the years, getting a top grade remains a mantra. They literally transform from the first to the second year, they grow a lot. On the other hand, one thing that has definitely changed is the relationship with work: they pay close attention to leading companies in the technological sectors and to experiences abroad, they know how to wait, but pursue their aspirations with determination, and make career choices that are compatible with the many things that interest them, and above all they are very attentive to the values of the companies they choose to collaborate with. It is an aspect that has by now become normal and no longer even needs to be taught to them. ■

Face to face with directors

With the creation of the Master of Science in Transformative Sustainability program, the Bocconi University Graduate School now offers 14 courses. Fourteen different ways to train tomorrow's leaders

by Davide Ripamonti @

MAGDA ANTONIOLI/ACME

Creative managers are trained here

Technical and humanistic skills to train the future protagonists of the creative economy

"A program with a great contamination of thought over various disciplines". This, according to **Magda Antonioli**, professor at the Department of Social and Political Sciences of Bocconi University and director of the [Master of Science in Economics and Management in Arts, Culture, Media and Entertainment](#), is one of the main peculiarities of the program - in a word it is called multidisciplinary. A program among the most characterized among those of the University's educational offer and which is the natural continuation of [CLEACC \(program in Economics and Management for Art, Culture and Communication\)](#), from which a large part of the students come: "But not only from there," specifies Magda Antonioli, also from abroad and

"many from the other Bocconi programs, or from humanistic or legal studies." The goal, continues the director, "is to train graduates interested in a national or international career in the fields of cultural and creative industry of the economy such as visual and performing arts, entertainment, cinema, media, publishing, entertainment, tourism, fashion, design and luxury. In recent decades these sectors have had, and continue to have, a central role in the economic development of various countries and of Italy in particular for their ability to produce economic value and to improve its attractiveness."

These are students who during their training receive a set of useful tools to read a complex but contemporary world, with



a mind open to future challenges. “ACME members will carry out management studies but also sociological, political, philosophical analysis”, continues Antonioli, “they will learn to have leadership and to work in complex teams and to perfect a critical pensiero. Their career will take place in cultural institutions, museums, cinemas, festivals, auction houses, tourism, fashion, publishing, but also within foundations, banks and public administration that will be supporting projects in the field of creative sectors and implementing policy interventions. Indeed, a very important characteristic is precisely the ability to dialogue with various artists and experts who often speak different languages”. With what functions? “Especially in programming, personnel management, marketing, event organization and fundraising,” says Magda Antonioli.



Modern managers who will have to combine classic managerial skills with new ones required by changing times: “Alongside more traditional subjects, such as budgeting and project management, we will also find, for example, data analysis and transversal skills: the managers of the future will have to be able to move between technology and soft skills. We will train professionals who combine technological and humanistic skills and we will help them in their journey also through close contact with stakeholders, with the presence during the lessons of numerous testimonials.” ■

MAGDA ANTONIOLI

Senior Professor of Tourism culture and territorial marketing and Director of MSCACME

CESARE CONTI/FINANCE

The importance of the virtuous circle

Sixth in the world according to the FT, the program is based on three pillars: quality of the students selected at the entrance; value of faculty and services; professional prominence of the alumni

Finance at Bocconi University has for years been in the top positions of the most prestigious international rankings. This result, as explained by director **Cesare Conti**, “derives from three main factors, which bind and feed each other creating a sort of virtuous circle. The first is the strict selection for admission. The students who arrive in our classrooms are excellent and highly motivated, whether they come from Bocconi three-year programs or from other universities, Italian and international. The quality and motivation of the students contribute strongly to the creation of a stimulating learning environment. The second factor is represented by the Bocconi team: on the one hand, the high-profile faculty, on the academic and operational/teaching levels; and on the other hand the staff, extremely effective in ensuring the best networking services. In particular, the career service facilitates the contacts for our students with the most prestigious recruiters in Italy and Europe. The third factor”, continues Conti, “is constituted by the professional placement of our alumni, who often occupy top positions in the most prestigious financial institutions and who constitute an important reference for our students.” A demanding program, at the end of which graduates will have acquired in-depth training



and also a mind set and an aptitude for work particularly appreciated by recruiters. The program, explains the director, “provides in the first year a common path that serves to give solid foundations, including quantitative ones, suitable for successfully carrying out most of the tasks related to the areas of investment banking, financial consulting, asset management, market finance, alternative finance and quantitative finance. In the second year students can customize their path, opting for the track in investing banking and financial consulting, for that in asset management and quantitative finance or even for a free plan. The training course is completed by the development of personal skills, the possibility of accessing exchange and double degree programs and, finally, the offer of special professional internships, which project our girls and boys into the labor market.”

Graduates of the Master of Science in Finance, says Cesare Conti, “have important career prospects as analysts (investment banking analyst, M&A analyst, business analyst, fixed income analyst, quantitative analyst, asset management analyst, trading, sales, ...) at banks, asset management funds and private equity funds, as well as in the finance area of large consulting firms or, again, in national and international supervisory and supervisory authorities.” And for many of them these prospects are realized abroad: “About 54% of our graduates find work outside Italy, particularly in the United Kingdom, Switzerland and Germany. And, a constantly growing trend that we are pleased to point out, many of them are women.” ■

CESARE CONTI

Associate Professor of Corporate finance and Director of Master of science in Finance

SIMONE GHISLANDI/GIO

Idealists, but with concrete foundations

Students enrolled in this Master of science want to improve the world in which they live. But with the right tools

From local government to the UN. This, in a nutshell, is the field of action of future graduates of the [Master of Science in Economics and Management of Government and International Organizations](#), as explained by director **Simone Ghislandi**, Associate Professor at the Department of Social and political sciences of Bocconi University: "Our students are people interested in the area of public intervention in a broad sense, both national and international. From the local to the global level, the state and public administrations are essential to the development of society. Government activity today represents one of the most complex professional environments, due to the variety of activities and sectors of intervention and the interrelationships between politics, management and public policies." Those who enroll in this course do so to



SIMONE GHISLANDI

Associate Professor of Health economics and Director of the MSc Economics and Management of Government and International Organizations

change the world, to have a direct and tangible impact in very important issues today such as, for example, sustainability, poverty, health or to work in large NGOs. Students who follow their ideals: "And they are also available to move abroad. About 50% of our graduates, in fact, find their first job outside Italy, regardless of their nationality," resumes Ghislandi, "whether it is in a municipality or in a large organization. Students during the program are first prepared to analyze and evaluate public policies through advanced analytical techniques, so as to be able to formulate strategies and manage projects. Then, at a later stage, they are supported in the development of a unique professional profile through the careful choice of complementary exams and the offer of numerous study opportunities abroad. The in-depth courses have been designed to incorporate the specific interests of the student and the needs emerging from the labor market". Another thing, for Ghislandi, is very important: "To internationalize was a winning choice taken a few years ago. The program now has a strong positioning on the market, thanks also to the name of Bocconi. The idea that drives us is to help create a management class of the 'public sphere' that is so much needed in this phase of transition." ■

GIANLUCA LOMBARDI STOCCHETTI/CLELI

Tradition and innovation

A longstanding program that knows how to keep up with the times

A course whose real strength is interdisciplinarity and which focuses on ordinary and extraordinary operations, observing them from different points of view: that of governance, that of corporate finance, that of accounting representation and that of legal and tax implications. "Students deal with issues that touch on different areas of management and this allows them to have an all-round view of the elements that characterize non-recurring operations such as mergers, demergers, transfers and company contributions," explains **Gianluca Lombardi Stocchetti**, associate professor at the Department of Accounting of Bocconi University and Director of [CLELI \(Economia e](#)

[legislazione per l'impresa](#)). "The course also deals with other issues related to the profession, the revision and functioning of financial markets, and the multidisciplinary approach that characterizes CLELI generates in the student the sensitivity to deal with complex problems having as reference the various and complementary business and legal profiles."

A program that, unlike others in the range of proposals of the University's Masters of Science, has an essentially national focus, but which is not closed to internationality: "Many of our graduates enter important business realities where they are involved in operations of international scope; their role is fundamental not only to explain to foreign colleagues how certain operations are conducted in our country, but also to facilitate dialogue between the different professional skills that are involved. "I consider experiences abroad an indispensable factor to face the world of work," continues Lombardi Stocchetti, "and recently we have introduced new stimuli to facilitate participation in the projects offered abroad by our University: places reserved only for CLELI students, the



MASSIMO MAGNI/INTERNATIONAL MANAGEMENT

Managers and founders, always international

The program prepares graduates who can find their way in the complex global landscape

"The main purpose of the [MSc program in International management](#)", explains director **Massimo Magni**, associate professor at the Department of Management and Technology of Bocconi University, "is to provide students with a broad preparation, so that they have the ability to understand diversity in a globalized and international world." A world that breaks down borders and that requires, to those who aspire to a high-profile managerial career, a strong predisposition to work in international contexts even immediately at the end of university studies. "40% of our students, who are equally male and female, have obtained a bachelor abroad", continues Magni, "while 50% of graduates, 98% of whom find work within a year, get a first job outside Italy".

The sectors in which graduates of the Master of Science in International Management most easily find employment are the traditional ones of consulting and finance, but a more recent trend is asserting itself with increasing force: "Many want to be entrepreneurs", continues Magni, "not so much in the sense of continuing the entrepreneurial activity inherited from others, but in that of starting their own business. Some are already startups before they graduate."

The program in International Management certainly has

many competitors in other universities, European and elsewhere. What are the peculiarities of that of Bocconi? "We adopt a highly practical approach, with the use of many real cases and simulations during which students have to make marketing, strategy, supply chain decisions", continues the director, "and this aspect is highly appreciated by the students. As is our close relationship with employers."

Another fundamental feature for an MSc program is that it is always up to date, ready to introduce into its program any innovations that may be necessary. Is this also the case for the Master of Science in International Management? "Certainly," Magni replies, "in particular what we push a lot on right now is the area of analytics, because we want our students to have the ability to understand and process the enormous amount of data that companies are increasingly having to manage. This is an aspect already in progress that the pandemic has helped to accelerate." ■



MASSIMO MAGNI

Associate Professor of Leadership and Director of Master of science in International Management

chance to attend compulsory courses at a distance, collaboration with the Order of Chartered Accountants and Accounting Experts of Milan to give international value to the training internships that our students can face in the last semester of their educational path. Let's not forget that IL CLELI is the program that best prepares you for the profession of chartered accountant".

The job opportunities for CLELI graduates are varied and evolving: "in the freelance profession and auditing, our students are offered job opportunities in strategy and management consulting companies, in Investment Banks, in Asset Management Companies, in Private Equity, in companies of Rating and in the legal departments of banking groups and operators on the financial markets". 60% of CLELI's students come from three-year courses of Bocconi itself, for the remaining part from universities

throughout Italy. "Many universities offer degree courses with these characteristics," says Lombardi Stocchetti, "but CLELI, born as an autonomous four-year degree course many years ago, enjoys great prestige and a leading position on the market." There is another strong point that Lombardi Stocchetti would like to highlight: "In our program teach, in addition to tenured professors, many professionals who, thanks to their experience, allow students to concretely understand the operations under study. The CLELI classroom is small and very cohesive, and the teaching faculty is committed not only to providing knowledge, but also to promoting positive, collaborative, critical-constructive attitudes, fundamental skills especially for those who will go to work in complex contexts.

Finally, the course has a particular structure, which enhances diversity: "In the first year students have only compulsory teachings," continues the director, "but in the second only one compulsory course is attended, allowing students to select optional exams, in Italy and abroad, of particular interest or on frontier issues. Even the accounting world, very traditional, is slowly changing." ■

GIANLUCA LOMBARDI STOCCHETTI

Associate Professor of Accounting and Director of Master of science CLELI



MYRIAM MARIANI/EMIT

Studying innovation

It is the key driver of economic growth and therefore more and more expertise is needed to understand where it comes from and how it is created

"In this course we study the innovation process. We study how innovative ideas are born (product, process, but also in services, in business models), how they are realized, how they reach end users and their implications for consumers, for companies, for the economic system as a whole. Because," says **Myriam Mariani**, director of the [Master of Science in Economics and Management of Innovation and Technology](#), "innovation has a huge impact on social systems and the economy." The program by its nature is very dynamic and open to continuous updates in the courses and in the faculty, with a young average age and an international profile. "It combines the more theoretical aspects of economics with the more applied aspects of management in a perfect balance that is difficult to find in other programs. Students are confronted with stimulating training on the themes of economy and innovation strategy, management of technology and innovation processes at the level of individual companies and markets, entrepreneurship in technological sectors," continues Mariani, "supplemented by exercises, group work, hackathons, with the involvement of managers and companies." Another important peculiarity of EMIT is the rigorous scientific approach that is taught, each choice must be the result of a path based on theoretical reasoning and the development of hypotheses that meet the empirical tests downstream. One of the majors that EMIT offers in the second year is in fact in Big Data and Business Analytics. The EMIT class is varied, very heterogeneous: "Our students come from every Bachelor program at Bocconi, many also from abroad, mainly from economics, management and data science but there are also those who have studied engineering. A lively mix, with everyone able to give the discussion a contribution from a different perspective," continues Myriam Mariani, "because by its nature innovation is pervasive and extends to all areas." And even the employment opportunities are the most disparate. "Graduates have the opportunity to cover different roles related to innovative projects in large consulting firms, multinational companies, companies with a high rate of innovation, international organizations, bodies of authority and regulation of innovation and intellectual property, or even as a marketing researcher for the development and launch of new products i, and often, about 40%, find employment abroad", explains the director. She adds: "EMIT is a program that also wants to welcome many women and can represent a different access for them to the economy and the management of innovation and STEM jobs in which the share of women is unfortunately still low." ■

ANTONIO MARRA/AFC

The program for modern

A program at once specialized and interdisciplinary, but always in step with the times



ANTONIO MARRA

Associate Professor of Accounting and Director of Master of science in AFC

The world's economies are now closely interconnected and the timely and accurate analysis and management of the economic and financial performance of companies plays a crucial role in business dynamics. The [Master of science in Accounting, Financial Management and Control \(AFC\)](#) "responds to these needs by developing a course of study on three paths of knowledge," explains **Antonio Marra**, Director of the AFC. The courses taught are linked to these thematic areas and contribute, in the first year, to provide students with a vision that is both specialized but transversal aimed at giving students a global vision of business dynamics, both financial and operational.

ALESSIA MELEGARO/DSBA

Data whizzes get their diploma here

A program with a high mathematical and statistical content, which trains professional figures who are increasingly sought after in companies and in research



MYRIAM MARIANI

Full Professor of Innovation and Director of Master of science in Economics and Management of Innovation and Technology



CFOs. But not only

In the second year they will then be able to choose from some majors related to professional opportunities: financial accounting and management control; auditing; corporate finance; data analytics. All this while maintaining close relationships with the world of work and integrating traditional classroom lessons with testimonies, simulations, case histories. "It is important that the technical skills related to performance and economic-financial communication, corporate finance, planning and management control are complemented by the ability to read the world in which the company operates and interpret its evolutionary scenarios. For this reason, our students acquire skills in economics, law, institutions and financial markets, corporate governance and business management", says Marra, "they learn to connect and use this knowledge to operate effectively both within organizations and as external business partners helping companies to make complex choices and manage change. The teaching model is linked to the professionalizing aspects rather than to the notions themselves, because we want to develop the ability to 'know how to do' and 'problem solving' rather than acquiring a mere knowledge of some principles, indispensable but which alone are not enough to manage - all around - the complexity of the

economic and financial aspects of companies in modern economies that must respond quickly, effectively and organized to many interlocutors very quickly." There are two traditional professional trajectories of these students: the first, the internal one of the company, generally in the financial direction that sees its ultimate goal in the figure of the Chief Financial Officer or the General Manager; the second instead for those who observe the company from the outside in the role of auditor, financial analyst, in investment banks, and in consulting: "All sectors that draw heavily on our graduates", Marra specifies. In recent years, however, two new trends are emerging and require a constant updating of programs: "On the one hand, that of big data and data analytics, with the growth of requests from employers for professional figures able to read and interpret complex data; on the other, the issue of non-financial disclosure, everything that companies do in terms of 'well being', sustainability, respect for the environment. Non-numerical indicators that today play a central role in business life," says Antonio Marra. AFC has two classes in Italian and one in English. In the latter, the representation of foreign students is quite high: "They make up about 40% of the class, from around fifteen countries," confirms Marra. "On the international level, the course has three peculiarities that distinguish it: first of all it is biennial, many other programs are annual. This allows those who attend it to have a more thorough preparation. Secondly, it is interdisciplinary, it is a course where 'financial management' is valued in a broader context. Third, the soft skills acquired through an extremely complete choice of extracurricular courses." ■

Mathematics, mathematics and more mathematics. And then statistics, computational disciplines and data, a lot of data. Those who enroll in the [Master of science in Data Science and Business Analytics](#) of Bocconi University, directed by **Alessia Melegaro**, Associate Professor at the Department of Social and political sciences, have a marked inclination for these subjects and for programming. "The program in fact draws its students from a different pool than the more classic programs at Bocconi," explains Melegaro, "these are young people interested in the use of advanced statistical and computational techniques aimed at the analysis of large amounts of data." And that they will therefore attend very technical courses, such as computer programming and database systems, business analytics, statistics, econometrics, and machine learning. "They come largely from our [BEMACS program](#), but also from business studies or even from engineering, mathematics and physics". The program includes a first semester which attempts, through courses with a strong quantitative component, to standardize the theoretical bases of the students. Then, from the second

semester, students can choose between two different paths: "The program is divided into two paths, a track in Data Science and one in Business Analytics, which share a common quantitative training and which can lead to common outlets, such as the choice to continue with a doctorate," continues Alessia Melegaro, "even if those who choose the track in Business Analytics will have a more applied course of study while the one in Data science will be more theoretical. At the end of the journey, however, they will be in both cases well-rounded data scientists very good at programming, and will be able to make a decisive contribution within companies, organizations and institutions operating in a society where decision-making processes are increasingly data-driven."

A strong point of Bocconi's Master of Science in Data Science and Business Analytics is its faculty: "A set of high-profile and wide-ranging teachers, who are constantly updated. There are those who have studied economics, some computer science, a few physicists... And the people who teach are the same ones who do research. Within the European panorama, ours is not the only example of a course with these characteristics," continues Alessia Melegaro, "but it is the one that goes deepest. It is a program that combines the business part with the disciplines of data science very well, and those who come out of here are graduates with great methodological skills". And companies, well before graduation, compete for them. ■



ALESSIA MELEGARO

Associate Professor of in Demography and social statistics and Director of MSc in Data Science and Business Analytics

ALESSANDRO MINICHILLI/MANAGEMENT

Reputation, course content and pursuing strengths

A program that trains global managers

It is the “broad spectrum” program par excellence among the Masters of science offered by Bocconi University. But it has the task of training specialists. This should not seem contradictory and the reason why is explained by **Alessandro Minichilli**, Full Professor at the Bocconi Department of Management & Technology and Director of the [Master of science in Management](#): “We train specialists for the different business functions,” explains Minichilli, “with a path that provides a detailed overview of all functions in the first year, and the choice of a specific major in the second. With the ultimate aim of training managers to reach top positions.” A perfect balance between openness and specialization. The program is held in both Italian (three class groups) and English (two class groups), but is in effect an international program that adopts English as the official language. “There is a lot of demand for the English class groups from international students from some of the major European countries. The program has a considerable international reputation. In the Italian market, we receive applications from all over Italy, so it is highly selective.”

Management programs are offered by many universities in Europe, including very high-profile options. What is the strength of Bocconi’s program that makes it so attractive on the international market? “I would say a mixture of elements,” continues Minichilli. “These include the University’s appeal, which is at the top of the rankings and which, especially in management, has been placed at the very top. There is also the

course content: there are lots of curricular options, Double Degrees, lots of exchange programs as well as opportunities for specialization. Teaching is also enriched by guest speakers who are professionals with on-the-job experience, company visits, case study discussions, ad hoc seminars and group work. Last but not least, we are a true research university, where research findings are shared in the classroom.” Regarding placement on the labor market, this MSc program has a wide variety of employment opportunities: “About a third are in consultancy,” Minichilli says, “another third in industrial areas and the rest in services, including the Big Four, finance and insurance.” ■



ALESSANDRO MINICHILLI

Full Professor of Corporate governance and family business and Director of Master of science in Management

GIOVANNA PADULA/MARKETING MANAGEMENT

The charms of a career in marketing

This is a program that offers rigorous preparation in all areas of marketing expertise, training managers who can navigate the complexity of digital environments and excel in an ever-changing environment

“There has never been a more fascinating time to work in Marketing than today.” With these words **Giovanna Padula**, associate professor at the Bocconi Department of Marketing and director of the [Master of science in Marketing Management](#), introduces this course of study. “The intensification of competitive pressure and the spread of digital technologies have



GRETA NASI/CYBER RISK STRATEGY AND GOVERNANCE

Born to combat cyber risk

A program in partnership with Politecnico di Milano to meet an urgent market demand

It is a program that stands out for two reasons, as **Greta Nasi**, Associate Professor at the Bocconi Department of Social and Political Sciences, explains. The Program Director since its inception in 2019 says: "Because it is the first program created by two outstanding Milanese and Italian universities, Bocconi and Politecnico di Milano, and because there are no other programs in the world with these characteristics, with the exception of a PhD-level program at Oxford." The [Master of science in Cyber Risk Strategy and Governance](#) was conceived, says Greta Nasi, "out of the need to holistically address the problem of people's interactions in virtual spaces. We realized that cyber risk was only focused on from a technological and legal point of view. There was no 360-degree approach, and at the graduate level there was no program that combined technical and organizational aspects." In addition, "the market has a demand for this interdisciplinary background and the prestigious institutions Politecnico di Milano and Bocconi have been able to effectively meet that demand."

Which two leading universities respectively in the fields of cyber security and social sciences have decided to do, with their respective competence areas. "The program primarily develops skills in technology and computer science, which are crucial for

an in-depth understanding of the cyber world," says the Director. "Secondly, economic, management and legal principles and aspects related to cyber risk are studied, to develop know-how and soft skills that allow relationships to be built at all levels of an organization, to influence strategic decisions and implement the actions needed to limit risks in the era of the digital economy."

In terms of career opportunities, the market has a high demand for profiles with this background: "The MSc prepares students to enter the labor market at companies, financial institutions, other institutions in the public/private sector and consulting companies, with two main profiles," says Greta Nasi. "As Cyber Risk managers, graduates will support tasks related to cyber risk management at the organizational level in order to govern business risk by designing and implementing ad hoc strategies. As Data Protection and Security managers, graduates will support tasks related to data protection, privacy management and compliance in order to govern data risks." The Master of Science in Cyber Risk Strategy and Governance has another unique feature. It has seven corporate partners (Cisco, Fincantieri, Intesa Sanpaolo, KPMG, NTT Data, Spike Reply and Vodafone) who are very active in the program and who each offer three scholarships. "All the students in our program already have a job offer," says Nasi, "testifying to the demand of the market. In addition, we have a high percentage of women students, on average over 30%, and we have achieved gender equality in the 2019-2021 class group, which does not always happen in STEM areas." ■



GRETA NASI

Associate Professor of Institutional scenarios of cyber risk and Director of MSc in Cyber Risk Strategy and Governance

significantly increased the importance of marketing within organizations and have expanded their areas of expertise. Our program has embraced these changes, recognizing the increasingly digital and data-driven nature of marketing today, and has responded with an innovative program that has expanded the spaces in the development of digital and analytical-quantitative skills, to successfully prepare managers interested in every type of career in marketing." In fact, the course of study provides an in-depth preparation on all areas of marketing expertise, offering content that revolves around three pillars: 1) consumer knowledge; 2) analytical-quantitative skills for data analysis to support company decisions; 3) the strategic management of marketing.

The first-year program, which includes the compulsory subjects, is designed around these three pillars and thus provides a complete vision of the characteristic contents of marketing. In the second year, students choose elective courses, thus starting to define a possible specialization path. To help

students in this choice, the electives are grouped into four distinct Majors or areas of specialization: communication, distribution and retailing, product and service management, and Big Data. "The strength of the program," continues Giovanna Padula "is not only in the completeness and continuous updating of the contents, but also in a teaching model that systematically integrates theory and practice: students are in fact exposed to the main theories and at the same time systematically challenged to deal with concrete situations and to develop effective solutions to complex managerial problems. This challenge is realized through a wide variety of experiences in the field, including participation in field projects included in the individual courses and participation in international contests typically promoted by large international companies." These experiences in the field also represent a great opportunity to stimulate the so-called soft-skills (such as problem solving, critical thinking, collaboration and communication) that are of fundamental importance to become successful managers.

The success of the program is highlighted by the placement data: 75% of students already have a job on graduation day and in the following months all students find a job. Given the nature of its contents, the program has an international vocation and prepares you to work in any geographical area. ■



GIOVANNA PADULA

Associate Professor of Marketing and Director of Master of science in Marketing Management

FRANCESCO PERRINI/TRANSFORMATIVE SUSTAINABILITY

Top sustainability managers

A new Master of science in collaboration with Politecnico di Milano is starting in the upcoming academic year. It will train 'managers/technologists' who focus on the sustainable transition

This program did not exist before, at least not with the same combination of subjects. "There are other Master programs in Europe that focus on sustainability, but they are either stronger in terms of management courses or in terms of technology. Ours will train 'manager/technologists' who are in great demand today by employers." **Francesco Perrini**, Full Professor at the Bocconi Department of Management and Technology, is Co-Director of the [Master of science in Transformative Sustainability](#). It is the second in collaboration with Politecnico di Milano and the latest in the University's educational offer of graduate programs: "The interuniversity MSc proposed by Bocconi and Politecnico aims to offer an integrated and innovative perspective on sustainability, in line with the needs of the market that increasingly demands multidisciplinary skills," explains Perrini. "The program ranges from subjects in technology and science related to sustainability (technologies for the environment, energy, mobility and circularity) to social sciences (management, finance, economics, quantitative subjects and



FRANCESCO PERRINI

Full Professor of Strategic finance and Director of the Master of science in Trasformative Sustainability

law) necessary to manage a 'just' sustainable transition." Sustainable transformation that today is one of the crucial challenges for businesses, given that the European Union's plans aim to encourage sustainability and create a climate-neutral, competitive and inclusive economy. As for the program, says Perrini, "each of the two universities will of course be responsible for the part in its competence area. We will therefore focus in particular on management and economics, while Politecnico will focus on enabling technology aspects related in particular to several areas: energy, the environment, chemistry, mobility and biology. There will also be courses on data analytics and innovation processes. But in the classroom, we will also discuss ethics, diversity and inclusion." The new MSc will mainly train two types of professional figures: "On the one hand a sort of sustainability executive," continues Francesco Perrini. "These are managers who make technological innovation the core of sustainability but at the same time have all the skills of a modern manager. On the other hand business analysts able to understand key technologies, who work for example in consulting." The program, which will be launched with the upcoming academic year, will initially be open to 50 students: "We expect young people from the various Bocconi Bachelor of Science programs, as well as with backgrounds in engineering and other areas. This Master of Science will allow sustainability to be implanted into the DNA of our students." ■

PAOLA PROFETA/PPA

Political science but with an extra gear

A strong quantitative component distinguishes the program from those offered by other universities

A program that offers advanced training in political science and public policy. "Students learn to understand the complexity of the political, economic and social dynamics of today's world," explains **Paola Profeta**, full

professor at Bocconi University's Department of Social and Political Sciences and director of the [Master of science in Politics and Policy Analysis](#), "and how national and international institutions can act to address and manage them. They also acquire the methods and tools necessary for the analysis and study of public policies and institutions that govern decision-making processes." A young program, an all-round Master in political science, but with an extra gear: "Compared to more traditional programs in political science," resumes Paola Profeta, "ours stands out for its strong quantitative component, which allows students, once they are ready to enter the job market, to be appreciated also for analytical skills and for their competence in reading and interpreting data." But what are the issues addressed and, above all, which sectors will offer the greatest professional opportunities?



ANTONELLA TRIGARI/ESS

At the frontiers of economics

A rigorous course with a strong quantitative footprint. Finding original answers to new and complex questions

“The [Master of science in Economic and Social Sciences](#) is aimed at students destined to push forward the frontiers of knowledge.” **Antonella Trigari**, associate professor at the Department of Economics of Bocconi University and director of the program, immediately clarifies the peculiarities of a program that has strong quantitative and methodological bases, in accordance with the most advanced frontier line of research in economics. “This Master of Science is rooted in the tradition of Bocconi, with a unique blend of economics focused on quantitative methods such as mathematics and econometrics, and excursions in the wider field of social sciences,” explains Antonella Trigari. “The flexibility of the program allows us to build highly personalized and interdisciplinary curricula. Only the first semester of the first year provides compulsory courses, then everyone can build their own path. Students enroll in this program with the aim of fine-tuning their analytical skills and acquiring knowledge to be able to pursue an international career. About two-thirds of our graduates enter the world of work directly by taking positions at prestigious employers that operate in fields ranging from the most renowned consulting firms in the world, to investment banks, large tech companies, international organizations, and non-governmental organizations in the public sector or in the economic publishing sector. The rest of our students continue towards a PhD at top graduate programs or with further training in academia.” A program that is not only economics, but which also includes, for

example, courses in sociology and economic history, “all useful for interpreting phenomena in the best possible way”, as befits that interdisciplinarity to which she referred previously. “The key words of the course are: analytical and quantitative skills; interdisciplinarity and flexibility; critical thinking”, continues Antonella Trigari, “we want to teach our students to answer complex research questions, to look for the ‘why’ of things without being satisfied with the answers we already have. They must always question everything without taking anything for granted.” An approach that is then reflected in the future professional career of graduates in Economic and Social Sciences, who will be co-opted “in positions that require high-level analytical skills and a predisposition to think critically and innovatively,” says the director. The program provides for the formation of two new classes every year, “and what immediately catches the eye is the growing level of internationalization of the classroom. It is a complex and competitive course, but despite this a strong sense of community develops”, says Trigari, “and the varied background of the students contributes to bringing new points of view and new perspectives”. ■



ANTONELLA TRIGARI

Associate Professor of Macroeconomics and Director of Master of science in Economic and Social Sciences

“This program allows students to gain a deep understanding of the challenging political, economic and social dynamics of the modern world and to identify how the political process shapes policy outcomes,” says Profeta. “Students learn how national and international institutions deal with these dynamics and will be prepared to find innovative and effective solutions to real-world political and economic problems. By combining a rigorous advanced knowledge of quantitative



PAOLA PROFETA

Associate Professor of Gender and public policy and Director of Master of science in Politics and Policy Analysis

disciplines with a multidisciplinary approach, students develop critical thinking on policy and policy-making issues, and the analytical skills to successfully design policies and take action in dynamic and complex contexts.” The future of these graduates will be in international institutions and organizations, in consulting firms, in the field of public affairs, and in companies. Some continue to study, opting for a doctorate. “A great strength is also represented by the possibility of opting in the second year for double degrees, especially those with the London School of Economics and with Sciences Po, which lead to obtaining a degree from both universities and increase the international placement of our graduates”, continues Profeta, “considering that our classroom is already by its nature highly varied, both with regard to the previous course of study and for nationality.” ■

The ecologi

by Edoardo Croci,
Annamaria Bagaini,
Tania Molteni @

According to the Renovation Wave strategy, 275 billion euros per year of additional investments in the construction sector are needed to achieve the EU 2030 objectives. To simplify and to coordinate the various stakeholders, so-called One-Stop-Shops are being imposed

The building sector has a significant role in achieving European ambitions in terms of energy consumption and CO2 emission reduction. Energy building renovation represents a strategic driver for the overall EU energy-climate policy, considering the high mitigation potential and the relevant co-benefits, such as air quality improvement. Although many policies have been enacted to boost building renovation in European countries, the current renovation rate remains too low, due to several barriers. According to the “Renovation Wave” strategy, around €275 billion per year of additional investments are required in the building sector to reach the EU 2030 targets, including €150 billion for energy efficiency. The EU’s recovery instruments provide an unprecedented



THE PAPER

Boosting energy home renovation through innovative business models: ONE-STOP-SHOP solutions assessment, by Annamaria Bagaini, Edoardo Croci, Tania Molteni



cal transition of the home

volume of resources for green transition since 37% of expenditure is focused on climate-related assets, including buildings' energy efficiency. These funds will strongly contribute to revitalising the construction sector, but further efforts are required to decarbonize the building stock and overcome barriers. Building energy efficiency improvements require the engagement of several stakeholders, such as homeowners, architects, real estate operators, and financial institutions, demanding different services which offer is highly fragmented. One-Stop-Shop (OSS) are emerging as innovative business models thanks to their capacity to facilitate the renovation process, by offering multiple services in "just one physical or a virtual stop" for both edges of the renovation chain. Indeed, OSS can provide different kinds of services: from information access to technical assistance, to fixed package solutions, to market players coordination, to financial support, up to general contracting services where the OSS is responsible for all stages of the renovation process. The aim is to simplify renovation processes by pooling together expertise and knowledge to reduce the time and effort required, increase quality of works, and reduce the gap between supply and demand sides. OSS concept can have various setups, involve different actors, and lead to different impacts on the renovation process. Through an extensive review on OSS across the EU, three business model archetypes have been identified in the paper [Boosting energy home renovation through innovative business models: ONE-STOP-SHOP solutions assessment](#) published by the authors in the *Journal of Cleaner Production*. These are: Facilitation model, Coordination model, and Development model. These archetypes have been categorized based on differences in five elements: value proposition, provided services, partnership management, revenue stream, and shared value. The Facilitation archetype provides lighter support to



THE LAB

The Sustainable Urban Regeneration Lab, in collaboration with Hines, Intesa Sanpaolo, MilanoSesto and Prelios, aims to develop and spread knowledge, methods, and best practices on Sustainable Urban Regeneration processes and how they generate value for the private sector and society



EDUARDO CROCI
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homeowners by offering information access, and technical and financial advice. A good example of this archetype is the [Haarlemse Huizenaanpak initiative](#) in the Netherlands, which provides free information access through an online integrated platform, along with technical consulting services, like energy audit and home diagnostic. The Coordination archetype operates in collaboration with other market players (e.g., banks, contractors, suppliers) in order to support homeowners along the whole energy home renovation process, from consulting, to project management and monitoring of energy savings. The [Superhomes initiative](#) in Ireland represents a good example, providing technical and financial advice along with support in selecting and managing suppliers and constructors, allowing a guarantee of high-quality work. The Development model provides the strongest support to homeowners, offering tailored and multidimensional renovation services under its responsibility, and covering the whole renovation journey. A good example is the ARTEE-Nouvelle initiative in France, which offers "key-in-hand" solutions for home renovation, combining consulting, project designing, financial products, and follow-up services. The identification of these archetypes contributes to understanding how different OSS models create and deliver value within the renovation chain and which benefits they bring to home energy efficiency processes. Results are now applied to develop and launch a targeted OSS initiative in Padova within the Horizon 2020 project [PadovaFIT Expanded](#).

The project aims at creating and piloting OSS initiatives in four European cities which strongly differ in terms of buildings characteristics, climate conditions, regulatory framework, market maturity, and customers' needs. Padova OSS will be launched at the end of 2022, followed by Timisoara in Romania. ■



THE COURSE

Offering the conceptual, methodological and practical tools to integrate the concept of sustainability into the corporate DNA: this is the feature of the course *Sustainability strategy and governance*.

There is more to it than

In the new corporate philanthropy, it is not only about how much you donate, it's also about how you donate and to whom. The ability to have an impact on the community in terms of ESG values is increasingly part of an integrated sustainable strategy

by Francesco Perrini @

In a global context that requires choices capable of creating value, but also of rapidly renewing conditions for growth in order to maintain competitive advantage, companies are called upon to pursue multiple objectives simultaneously. Attention to sustainability has finally spread on a large scale; the scarcity of resources and the crisis we are experiencing are leading to acknowledgement of philanthropy as having an important role in the search for solutions to complex social problems. Defined as a new managerial model based on the enhancement of the relations and abilities of the firm to strategically integrate social and environmental issues, corporate sustainability is acquiring increasing importance as an innovative approach to business success. The global challenges for sustainable transformation that companies are facing today bring them to innovate in the ability to design and industrialize a kind of “sustainable sustainability”, i.e. composed of new or hybrid initiatives that are well balanced across different dimensions: economic, environmental, social and governance (ESG). The integration of these dimensions makes it possible to pass the threshold beyond which transformative processes enter positive, self-sustaining feedback loops, thanks to widespread spontaneous behavior inspired by authentic economic advantage but also environmental and social interest shared by all ecosystem stakeholders. This turning point is the condition that will enable us to sustain a broader and more intense environmental and social sustainability in the community over time. On the other hand, it has become an evident



FRANCESCO PERRINI
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truth that there is a close link between economic success and social progress. Every day, a growing number of companies demonstrate how philanthropic investment generates shared value and has a positive impact on business as well. In light of the current crisis, the reduction of resources (the how much) that are allocated to giving activities is leading individuals and companies to rethink ways of practicing philanthropy from passive to active (the how), in addition to a rethinking of the recipients (to whom). Our recent research shows that philanthropic investment - currently growing - integrated with sustainability is increasingly becoming a strategic tool for companies acting for the common good. In particular, consistently with the health situation, top recipients of corporate generosity are “Civil protection, emergencies and disasters” and “Health and public health”. Finally, these results fuel the debate on the need for companies to move towards broader objectives, making corporate philanthropy a laboratory for the sharing of models and practices for social innovation and engagement of territorial communities.

In conclusion, on the one hand, it is necessary to continue to stimulate awareness of the importance of investing in communities, which must produce not only an immediate good, but an outcome and an impact capable of triggering a social change. On the other, there needs to be the commitment for seriously transformative sustainability, so that companies must formulate a sustainable strategy integrated with socially responsible giving, since this not only helps companies prosper and grow, but also generates long-term value bringing benefits to all stakeholders and future generations.

For sustainable companies, ESG and Corporate Giving are not about meeting certain guidelines, but laying the foundations that will determine the company's future performance. Businesses that fail to transform are forewarned! ■



THE COURSE

Gli strumenti di fundraising delle aziende non profit is designed for those involved in managing the economic sustainability of social projects and in particular for managers and supervisors of Third Sector organisations.



profit



Philanthropy professionals

CEO of Dynamo Academy, Bocconi alumna Serena Porcari talks about how the world of corporate giving is changing and how she helps companies, through training and consulting, to actually implement their sustainability plans

by Emanuele Elli @

Goodwill is not enough to give well (and to receive well). To consistently insert social commitment, philanthropy or volunteering activities into CSR strategies and ESG profiles, advanced professionalism is needed both in the ranks of companies and among third-sector organizations. Maria Serena Porcari, manager and expert in social enterprises, a Bocconi alumna (and today also an SDA Bocconi faculty and board member) has known this for a long time, since already in 2004 she was among the initiators of the Dynamo Foundation, born precisely with the aim of supporting planning and development of business organizations addressing social problems. From that reality, various projects have come to life, such as the Dynamo Camp and Dynamo Academy, of which Porcari is now CEO, which develops training and advisory programs for companies, students and local authorities on the issues of social enterprise and achieving the common good.

→ How have you seen the relationship between companies and non-profits change in recent years?

The report on Corporate Giving in Italy released by Dynamo Academy and SDA Bocconi Sustainability Lab highlights some trends. 76% of companies now expect the integration of ESG issues at all levels within 5 years, with priority given to issues of Diversity, Equity and Inclusion. It is true that the pandemic has shifted the focus of companies towards the health sector, but at the same time it has accelerated some needs and processes such as the importance of increasingly involving employees in social responsibility activities. Corporate volunteering has grown significantly: 53.25% of companies state they have opened activities in this respect. Another aspect that has acquired importance is the relationship with the local community and territory. Community investment has become the purview of CEOs, boards of administration and top management, a sign that the commitments made in this sense are perceived as being of strategic importance, they are no longer just public relations issues.

→ In what aspects do companies display the greatest need for training and consultancy?

The most pressing question for businesses is how to put flesh in their sustainability plans. Even the largest groups, which are also investing and writing ambitious plans, are often not adequately equipped to translate these efforts into practice. The other aspect for which we are often called upon as Dynamo Academy is to set up and disseminate best practices for employee engagement in companies, from the organization of crowdfunding donations to the correct HR policies to manage corporate volunteering. Today the management of CSR in a company today requires transparency and reporting.

→ Third-sector partners are not always ready to support this. How do you come to terms with these assumptions?

Companies need to effectively report on their activities, including social activities, which they may already carry out but which are not yet properly represented in financial statements. It is a complex measurement, which requires the involvement of stakeholders and partners, who, however, might not have the





necessary skills. In this gap between supply and demand, new service opportunities have arisen, entities that act as a bridge between the demand for corporate sustainability and the offer coming from the third sector. The new legislation on sustainability reporting and the work on social taxonomy will require an even greater effort and I expect the non-profit sector, after an initial use of external resources, to progressively develop the ability to relate with business organizations using the same language.

→ The ESG requirements provide an incentive to donations but also introduce additional constraints. Does this make the context more or less favorable to corporate giving than in the past, particularly in SMEs?

At Dynamo Academy we have developed a methodology, which is called Social Path, which encourages SMEs to think strategically about sustainability and give themselves a rational and effective structure. The first step is to look internally, because initiatives sometimes already exist but have been decided by individuals, often without the knowledge of the neighbors in the next division. The second step to arrive at combining your results in a veritable ESG matrix is to identify the relevant KPIs, bringing out the aspects

*MARIA SERENA PORCARI
Graduated with honors from Bocconi in Business Administration in the 1990s, with a thesis with Professor Vittorio Coda on Danish companies owned by foundations. After almost a decade spent at IBM, in 2004 she became one of the pioneers of the Dynamo Foundation, promoting the Chair of Social Entrepreneurship at Bocconi. "My relationship with Bocconi is a constant of my professional life; the international environment of the university and the ability it has to open one's mind through various kinds of stimuli are aspects that already struck me as a student and that left me a great legacy in terms of preparation and relationships".*

where you can really make a contribution. Better having a few goals, but concrete ones. Often, however, companies, pushed by the ESG wave, overestimate sustainability variables by creating very complicated, I would almost say unmanageable, dashboards of metrics. When social sustainability leaves the realm of strategy and becomes just risk management and pure compliance, its meaning is lost.

→ Is there a risk of greenwashing also for issues of social sustainability?

The environment has been object of intervention at the EU level for some time, and a common taxonomy is being created to enable organizations to speak the same language. In the social sphere, this is still far from being the case and room for subjective evaluation is broader. The risk of confusing charity and marketing has always existed and for this reason realities such as CECP (Chief Executives for Corporate Purpose, the association founded by Paul Newman of which Dynamo Academy is Italian partner) were born to encourage companies and institutions to put their cards on the table, to declare how many resources are devoted to social initiatives, how, on which projects, and with what results.

Brokerage is key to change the scenario

The high levels of corporate giving in countries such as UK, France, Belgium or Switzerland are also due to the development of structures that act as philanthropic intermediaries, explains alumnus Marcello Gallo, president of the Donor Italia non-profit organization

by Emanuele Elli @

Italy is not yet a country of donors, and less so when it comes to companies. Due to the small average size of Italian companies, which limit their resources and professionalism, but also the lack of suitable interlocutors in the non-profit sector, corporate giving in our country is significantly lower compared to the reality of neighboring countries such as Switzerland or France. "The scenario, however, is rapidly evolving", guarantees Marcello Gallo, executive vice president of Intek Group, with a Bocconi degree and over 35 years of career in the world of finance, but also co-founder of Dynamo Camp and today president of the Donor Italia Foundation, a leading philanthropic brokerage entity in Italy. "The diffusion of ESG principles has shown that companies, even the largest ones, suffer from a marked gap between declarations of intent and activities actually implemented. This awareness, however, has produced a positive trend, namely that of separating the corporate functions that deal with sustainability from marketing one, as it had always been, to make them grow in pace with the entrepreneur or top management, precisely so that they can be translated more concretely into action and not just communication.

→ The Italian scenario, however, suffers from some historical delays, what are they due to?

The Edelman Trust Barometer reported, in a recent survey, that in many countries companies are perceived by people as the most reliable counterparts in the social sphere, ahead of state or church. This is not the case in Italy, due to the historical differences in conceiving the nature of the firm and the role of philanthropy, for example, with respect to the Anglo-Saxon world. To this, problems in welfare policy need to be added. Elsewhere the rules provide different incentives for entrepreneurs and companies to redistribute resources on the territory or among the employee community. The consequence is that countries such as England, France, Belgium, but above all Switzerland, have a much higher volume of donations from the corporate sphere and this difference



CORPORATE GIVING

is also seen in the development of philanthropic intermediation structures, which can have a key role in changing the scenario. In fact, these institutions act on a pivotal aspect which is the lack of common language between the companies that would like to establish a business-like dialogue and charities which, although deserving, are not equipped to deal with corporate interlocutors.

→ As it is an issue of skills, where do you start from? From in-company training, from universities, from the non-profit world? I am not in a position to give grades, but I believe that it is the non-profit sector that needs to do the most progress. These actors must become aware of the fact that, especially when reaching a large scale, it is necessary to have an adequate staff, who must not only be skilled but also paid the right amount and, at least in part, dedicated to the care of relations with donors. On this front, universities seem more attentive to me, there are already numerous degree courses and training initiatives on the subject that attract many students. I myself have a daughter who graduated from Bocconi who told me that many of her friends of hers are choosing careers in non-profits. Sensitivity is therefore not lacking, but it is time for the world of work to adapt, and consider these professionals for what they are worth. Rather, universities could increase the number of short programs dedicated to third sector personnel, imparting that managerial approach and knowledge that corporate donors demand.

→ How much does the lack of ad hoc financial instruments affect donations?

In the corporate world, either by custom or by the desire to affirm one's brand, philanthropic activity is often delegated to a foundation. However, setting up a reality of this type requires high costs, demanding structures and the fueling of continuous activity. The result is that many corporate foundations, after the start-up phase, remain blocked: they have funds available, but they disburse them at a glacial pace or not at all. A philanthropic broker like Donor Italia has among its tasks, in addition to promoting Donor Advised Funds (DAFs), to revitalize these corporate non-profits.

→ Speaking of DAFs, what exactly are they and how they can help large enterprises and SMEs?

DAFs are nominative philanthropic funds, created by an organization or an individual through a modal donation, and hosted by umbrella foundations which assist the donor to help him/her give in a conscious, effective, safe and strategic way to the recipients the donor has identified, relieving him/her from all legal, administrative and managerial obligations. They are useful tools that in Italy are for the moment less widespread than elsewhere, but I am convinced that DAFs will soon be successful in Italy too. I would like to emphasize that DAFs are not the only service that the Donor Italia Foundation offers to fledgling philanthropists. For example, we are the only Italian partner of Transnational Giving Europe, a network made up of 20 illustrious European donor foundations, through which international donations are facilitated, ensuring certainty to donors about the movement of funds and tax deductibility according to the forecasts made for the country of residence. Tax incentives, and in particular the instrument of tax deductions, are an issue that deserves further study and around which a better dialogue could be built between all actors, private actors, government actors and the private sector.

MARCELLO GALLO

A Bocconi graduate in Economics with a thesis defended with Mario Monti, Gallo turned to management after imagining a professional future as an economist. "While I was waiting to start working at the Research Department of Banca Commerciale Italiana, I did an internship as analyst at Citybank," recalls the operational vice president of Intek Group. "That experience of working on finance, traveling between Milan and New York, made me discover an exciting world which I have never left since". When he joined the Intek group, he dealt with private equity, special situations, or transactions involving both companies in crisis and NPLs and, today, investments. He is one of the founders, together with Enzo Manes and Serena Porcari, of Dynamo Camp and president of the Donor Italia Foundation. "From my experience at Bocconi I have learned that curiosity needs training and the ability to explore relationships coalescing between many different elements. It is the little secret of those who study economics: they must know the theory but always remain linked to trends in society, politics, industry. At Bocconi I also owe the fact that I could do an Erasmus when the program didn't exist yet. I spent four months in Paris at ESSEC, and I remember that when I told my friends about it they couldn't believe that my university had let me go on exchange".





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The deadly plot. Like Laocoön's serpents

The toxic effect on the economy of the link between corruption and money laundering is all the more harmful because it unfolds in three successive stages: trigger, multiplier and accelerator. When implementing anti-corruption and anti-money laundering regulations, it is essential to be aware of this

by Donato Masciandaro @

There is a widespread perception that corruption on the one hand, and money laundering on the other, are a toxin for the economy. Much rarer is the awareness that when the two phenomena intertwine, the toxic effect is even more harmful: like the two serpents with Laocoön, suffocation can be deadly. In a recent study (*Corruption and Money Laundering: You Scratch My Back, I'll Scratch Yours*, *Metroeconomica*, October 2021), the intertwining of corruption and money laundering has been systematically analyzed for the first time, both theoretically and empirically. The intertwining of corruption and money laundering is special



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because it unfolds through three different channels: the trigger effect, the multiplier effect and the accelerator effect. These three effects can be highlighted starting from money laundering's distinctive feature. In fact, there is no economic crime that does not automatically produce a demand for money laundering. Anyone who commits a crime to gain an economic advantage has one goal: to minimize the likelihood of being discovered. Therefore, it is necessary to minimize the possibility that the offender can be traced back to the illegal income. The demand for money laundering is thus fueled by a public of criminals, who can be



considered very different from other points of view: ranging from tax evaders to members of a criminal association. Here the trigger effect emerges: even the corrupt have an illegal income to hide and clean up, and therefore have a demand for money laundering. But money laundering is not just a general crime; it is also the most toxic crime for the economic and financial fabric, and consequently the social and political fabric. Economic analysis should be given credit for identifying this crime's features since the '90s, and it had already been the subject of interest in legal and criminological fields. Its distinctive feature is precisely its multiplier effect. The multiplier mechanism is based on the assumption that cleaned money can have three destinations: consumption and investment in legal and illegal sectors and activities respectively, with their respective rates of return. Illegal investment will generate income that automatically produces new demand for money laundering. The circle is closed: if there is a supply of effective money laundering services, the economic weight of those who commit crimes tends to rise in a society. Even the supply of money

laundering, in advanced countries as in emerging ones, is old – think of banknotes – and new at the same time: for example even during the pandemic, new risk profiles that had already emerged became even more evident, such as money launderers operating in electronic channels, including cryptocurrencies.

Lastly, in the relationship between corruption and money laundering, a third effect may emerge: an accelerator. This effect arises from the fact that the effectiveness of anti-money laundering regulations depends on authorities' ability to detect so-called suspicious transactions. But in turn, suspicious transactions are reported by a whole range of professional operators, ranging from banks and post offices to gambling establishments. Yet, if those people charged with supervising or making reports are corrupt, the quality of suspicious transaction reports will drop and the effectiveness of money laundering operations will increase.

The intertwining of corruption and money laundering has been recorded both in advanced countries, especially in international transactions, and in emerging countries.

There must be an increase in the awareness of the intertwining of the two phenomena when designing and implementing anti-corruption and anti-money laundering regulations, both nationally and internationally. Otherwise the risk of the two serpents suffocating Laocoön is bound to increase. ■



THE PAPER

Corruption and money laundering: You scratch my back, I'll scratch yours, by Raffaella Barone, Donato Masciandaro, Friedrich Schneider

Poorly paid care wo

In most countries, it is precisely the workers in the care professions who are penalized in terms of remuneration, thus increasing the gender gap. Lack of strong labor unions and a low level of social status are the main causes of this penalization

by Zachary Parolin @

Workers in care occupations play a critical role in modern economies. Childcare workers, for example, play a strong role in influencing a child's development, as well as allowing parents of children to balance their family lives with their own employment demands. Despite the importance of care work, however, care workers are, in most countries, paid less relative to workers in other occupations.

The disparities in pay for care work matter for several reasons. To start: care work is heavily gendered, with women working around two-thirds of care jobs, on average. Ensuring fairer wages for care workers is this closely tied to promoting greater gender equality in the labour market. Additionally, demand for care work is also rising across most European countries, increasing the importance of ensuring stronger relative wages for worker in care occupations.

In a recent study, Emanuele Ferragina and I used data from 25 different countries to investigate the primary factors behind why care work is paid less than other types of jobs. In nearly all the countries we investigated, care workers are paid far less than workers in other jobs but, notably, there was large variation in this 'care penalty' across countries. In the United States, for example, the care penalty is much larger than in countries such as Finland or Denmark. Italy performs about average, but the data exclude informal care workers, which are likely a large segment of the Italian care economy. What factors can explain differences in care penalties across countries? The size of the care penalty is not about how many women versus men work in the jobs, we find. Moreover, we find that differences in the care penalty are not primarily



ZACHARY PAROLIN
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due to relative supply or demand for care work in the country, or the demographic composition (such as the age profile or share of immigrants) within the country. Instead, the most important factors driving the size of the care penalty were labor market institutions, such as collective bargaining coverage, and the size of the welfare state.

More inclusive labor market institutions not only offer more voice and security for workers in formal care occupations, but also contribute to more equal wages across the rest of a country's distribution. As a result, stronger unions and higher collective bargaining coverage are an important factor in shaping the care penalty. More generous welfare state benefits, meanwhile, increases the wage that care workers demand when entering employment. Where out-of-work protections are stronger, care workers can wait to receive a stronger wage and better working conditions before agreeing to enter such a job. These patterns also contribute to fairer wages for care workers relative to other jobs.

The importance of stronger labor market and welfare state institutions becomes all the clearer when we estimate what the care penalty in the United States could look like if it had the collective bargaining coverage and social spending of the average country in the European Union. Rather than having one of the largest care penalties, the United States would have a care penalty that is essentially no different from its European peers. This would contribute to notable gains in improving gender differences in wages in the American labor market.

As the need for care occupations continues to rise, it becomes all the more important that workers in such jobs are paid according to their social and economic value. Care work is of critical importance to a well-functioning economy, yet the heavily-female jobs are often poorly paid. Stronger labor market institutions and out-of-work income support are two factors that can contribute to smaller care penalties across wealthy countries. ■



THE PAPER

Care earnings in the United States and 24 European countries: The role of social policy and labour market institutions, by Emanuele Ferragina, Zachary Parolin



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Why it is time for a E





European debt agency

Two trillion euros in interest payments is how much would have been saved by the eurozone governments if such an institution had been set up at the same time as the euro was introduced. This is the amount two Bocconi scholars have calculated

by Massimo Amato and Carlo Favero @

Jean Monnet, the father of Europe, used to say: “Europe is made in its crises”. If this is so, then no time is more favourable than the one we are in. There are in fact three crises: the Covid crisis, which is hopefully about to pass, the climate crisis with the need for a European Green Deal, and, lastly, the current geopolitical crisis.

All this requires investment: for military integration (a condition for effective diplomacy) and energy (energy union, common network, new energy mix and independence from Russian gas), not forgetting the public goods of health and education. And it implies an appropriate strategy for financing public debts that can only grow.

A look at the most ‘virtuous’ nation, Germany, tells us that this is the case: Finance Minister Lindner, until yesterday a supporter of the return to the stability pact and the “Schwarz null”, has proposed to the Bundestag a plan to strengthen the Bundeswehr by one hundred billion over ten years to be financed by debt and the Golden Rule (exemption of specific investments from the sustainability parameters); on the energy front, just to stabilise the grid for the transition to renewables, a storage requirement of 2 terawatt hours in ten years has been calculated, equivalent to around 200 billion. In addition to this, at European level, infrastructure investments planned to improve the efficiency of the grid by 2030 amount to between EUR 375 and 425 billion.

But the time is also right for debt financing.



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Less restrictive rules could be decided in the coming months, and this will require greater coordination in the eurozone countries’ access to markets for their financing.

The picture is made even more complex by the inflationary pressures of the crises, with restrictive implications for monetary policy and an increase in the cost of financing public debt, asymmetrically, throughout the euro area.

Our proposal for a European Debt Agency (EDA) goes in the direction of coordinating and containing the cost of financing public debt, without mutualisation. The EDA would address the markets by issuing bonds and would return the funds obtained to the eurozone states in the form of perpetual loans. In turn, the states would repay them in annual instalments calculated according to their fundamental risk, i.e. without any mutualisation. However, the states would be hedged against liquidity risk, and thus against the most volatile and irrational element of market pricing, namely market sentiment.

In a scientific article, we calculated the savings that such an agency would have enabled all the member states to make if it had been set up at the birth of the euro: even under the rules of the SGP, all the eurozone states, including Germany, would have been able to save on their debt servicing, from 2002 to 2019, a figure in the order of 2,000 billion in interest, linked to an only partly irrational exuberance of the markets which, instead of seeing the Union as a whole, were forced to consider its components, as if there were no solidarity between them.

In the face of an increasingly uncertain and risky scenario, Europe faces major challenges that call for greater unity and cooperation, which can and must also involve more intelligent management of public debt. ■



THE PAPER

Europe, public debts, and safe assets: the scope for a European debt agency, by Massimo Amato, Everardo Belloni, Paolo Falbo, Lucio Gobbi



Stimulating interest and engagement using gaming techniques is a growing phenomenon: in the education sector alone the market today is worth about 800 million dollars and in 2028 it is expected to have a value of about 6.5 billion. But the debate on its effectiveness in learning is still open and depends on the real ability to review teaching methods and to keep up with changes

Study (and work) with



Let's play TravelMate!

A mission to be accomplished starting from the right team, selecting each member according to his or her characteristics and adopting new strategies when faced with unexpected events. This is TravelMate, the business game, part of the Futuro@lavoro project, created by Bocconi and Repubblica@scuola.

Let's start from the mission: the director of TravelMate, a digital magazine about travel and experiences around the world, offers the player the opportunity to go on a short trip with some companions, at the end of which he/she will write reviews of the experiences lived on the road. First of all, however, you will have to select 4 travel companions from 8 possible candidates within the allocated budget.

The aim of the game is to understand the importance of getting to know the members of one's team well, so that each member is assigned the activities most in line with his or her profile, and to value interpersonal differences as a source of value and growth, both for the team and for each of its members.

by Leonardo Caporarello @

Engaging and stimulate are likely two of the most discussed words in the last 24 months: "how to engage and stimulate my students? how to engage the collaborators of a virtual team?"

Of course, having a class of students, or the members of a work team, who are sufficiently involved has always been one of the basic elements that determine the ability of the social entity itself (class, work group ...) to "feel good together, work well" and therefore to be more likely to achieve the assigned objectives.

Level of engagement, naturally, is not a static concept but evolves continuously, even more quickly and with greater intensity in situations characterized by uncertainty, real or perceived.

In the latter cases, being able to stimulate interest so that it leads to being more engaged becomes an important skill for teachers as much as for managers.

Which levers can we pull to work, continuously, on both fronts, that is, to stimulate interest and keep the level of engagement high? One of the most effective areas and one to which we are all in some way exposed since childhood is the game.

The game will be considered successful when it manages both to attract players, that is, to stimulate their interest in playing, and to keep them engaged during the game itself. Speaking of successful games, think for example of PUBG, played by about 7 million users in the last 30 days, or Minecraft, which had about 3 million players only last February, or Candy Crash which has about 270 million players per month and generated, only in 2020, revenues of more than 1 billion dollars.

If these games are so successful they are evidently designed to stimulate players and keep them engaged. So why not study these levers and understand how to borrow them and adapt them to contexts other than gaming? This



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is the question on which the phenomenon of gamification is based.

Therefore, using the methods of game design we try to create experiences that can stimulate interest in issues such as Sustainable Development Goals or Managing conflicts in the global landscape or International Negotiations, so that participants are stimulated to study them deeply, activate the comparison with other students or companies and - why not? - try to develop their critical thinking.

There are many experiments and so-called gamification solutions in the education sector, whose market today is worth about 800 million dollars and in 2028 it is expected to have a value of about 6.5 billion.

However, there is wide debate about their actual influence on learning processes. In fact, at least two dimensions of influence should be taken into account: a) the continuous evolution of the phenomenon itself, thanks for example to the interaction with other phenomena such as VR, b) the ability to (re)design learning experiences that natively adopt teaching methods based on gamification and that in some way contribute to modeling content, or more generally elements, of the subsequent phases of the teaching experience.

The higher the level of motivation of the interlocutors, the more the gamified system will be able to measure the behaviors performed and to return continuous, structured and well-argued feedback.

In addition, the system must be designed entirely on the person, who must have an active role, must act and must make decisions, after which the system must return the feedback necessary to understand the usefulness and effects of the action or decision made, so as to review future behaviors.

Gamified method designed around the person; fresh and mobile user experience; procedure that requires active and frequent interaction by the person / user; method capable of measuring the effectiveness of the actions or decisions taken and, consequently, capable of returning feedback that can direct subsequent behaviors: these are the basic elements that will stimulate students' interest and increase their level of engagement. ■

your joystick

The entrepreneurial

To find lenders through digital platforms, startup founders must have a narrative strategy. A study analyzes the different effects and results, depending on whether you choose to put the aspects of experimentation or those of planning at the center of your story

by Charles Williams @

Crowdfunding has transformed the landscape for entrepreneurial funding - offering new ways to raise money through digital platforms. Crowdfunding platforms have also been a boon to entrepreneurship research because they are like a “petri dish” for early stage entrepreneurship, where we can observe individuals and teams creating, pitching, and carrying out entrepreneurial projects in ways that were previously invisible. Research has explored a variety of factors that influence the success or failure of projects in crowdfunding. Most of the studies have explored success in rewards-based crowdfunding, which was more prevalent than equity crowdfunding until recently. Studies have found a number of characteristics of project creators - such as their prior experience, their professional background, and their social networks - that increase the success of fundraising. In addition, some aspects of the project itself - the extent of prior development and how well targeted the project is to the community - can also increase success in fundraising. But now research is turning to the nature of the story that project creators tell to engage their audience. There is a central challenge, however, for entrepreneurial storytelling: founders are trying to tell a story when the end is still to be written - we can’t know for sure how this venture will turn out. Thus they cannot offer a complete narrative arc, from a beginning, through a central struggle, to a satisfying resolution. Instead we understand entrepreneurs as offering narrative fragments, building blocks of stories, which audiences may put



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together in ways they find most understandable. My recent research, with Professor Chiara Spina of INSEAD (a recent Bocconi graduate), tries to understand whether online pitches should include aspects of entrepreneurial process as one element of the narrative that they share. We study stories based on two tools that entrepreneurs use in the process of building new businesses - planning and experimentation - to see if discussing these in pitches will strengthen the case to funders. These tools are two fundamental but very different approaches to new ventures: planning minimizes uncertainty by identifying intermediate steps and laying out a timetable, while experimentation focuses on the inherent uncertainty and uses rapid learning by doing to explore it. We find that when project creators share their use of these tools in describing their project, they are more likely to succeed in raising funds from the crowd. In general, discussing experimentation is more associated with success, since the likelihood of receiving funds is six percent higher for projects that discuss experimentation, while it is four percent higher for those that discuss planning. However, these narrative elements interact very differently with the prior experience of the entrepreneur. Experimentation narratives are by far most successful in cases where it is the first time on the platform for the entrepreneur, but the relationship goes away - or even turns negative - when they are returning after multiple projects. Planning, on the other hand, retains its positive association and even strengthens as



THE PAPER

Sharing stories about venture creation: how crowdfunding audiences react to experimentation and planning in entrepreneurial narratives, by Chiara Spina and Charles Williams



storytellers



entrepreneurs gain more experience. While we find these patterns through observing tens of thousands of real world projects on a popular crowdfunding platform, it can be difficult to conclude decisively that this is a truly causal relationship. But we have gone on to replicate this pattern in online experiments in which we recreate the experience of reading and bidding on a project. So we are reasonably confident that these narrative approaches are really leading to the different outcomes.

We draw two important conclusions from these findings. The first is that entrepreneurial storytellers can improve their connection with the audience and strengthen their claims if they share elements of the process, or “work in progress,” of developing a new venture. Sharing aspects of the venture creation process can, in fact, connect with the audience rather than turn them off. Perhaps more importantly, though, the types of stories that entrepreneurs tell need to be consistent with their identities. If you are a newcomer, then discussing experimentation can help overcome the lack of expertise that audiences are likely to see in you. However, if you are a more experienced entrepreneur, then highlighting the remaining uncertainty in a venture by discussing experimentation may actually undermine the ways in which the audience sees you as expert or knowledgeable.

In a broader sense, entrepreneurs need to keep in mind that the stories they tell will resonate with audiences only when they fit with the foundational identities that they are communicating. ■



PODCAST

The rise of crowdfunding and how to best approach crowdfunding audiences is discussed in Story Scanner podcast with Charles Williams, professor of business strategy at Bocconi, and Benedetto Pirro, cofounder of Crowdfundme.



This is what th

Funding also from venture capitalists and established companies and a change in the country's financial culture: Benedetto Pirro, alumnus and cofounder of Crowdfundme, talks about the Italian startup ecosystem

by Andrea Celauro @

A new, more courageous alliance, in which companies and institutional investors, typically venture capitalists, walk hand in hand with crowdfunders, not leaving the task of financing startups only to the retail market, or to individuals who decide to invest in innovative companies. Thus Benedetto Pirro, 36-year-old Bocconi alumnus and cofounder of Crowdfundme, a company that since its foundation in 2016 has raised almost €71 million and was listed on the stock market since 2019, summarizes the key step that would allow all the Italian crowdfunding system to make a leap and reach the levels of other EU countries and Great Britain.

Hype and early success are crucial to get on top of the algorithm

A specific goal: raising €10,000 through crowdfunding on Indiegogo to publish a photo book containing 50 destinations for climbing lovers that are off the beaten track. The objective was achieved in just 24 hours. “We ended up raising 25,000 from 600 people”, says **Alessia Fontanari**, a 29 years old Bocconi alumna and cofounder of **Mapo Tapo** together with Bocconian **Daniele Calvo Pollino** (they met during their year in Shanghai together for the Double Degree in International Management). A very positive crowdfunding experience, taken to counter the misfortune of having launched the business based on adventure travel for lovers of climbing and extreme sports just a few months before the second lockdown at the end of 2020. “We decided to create Mapo Tapo because of our love for nature travel and because we realized that, although fans of extreme sports are growing in number, the outdoor industry tends to remain rather unstructured. Furthermore, we noticed that 90% of climbers and trekkers traveled alone because they had no travel companions with whom they shared their passion: here we aggregate them in small groups”. All with an eye to sustainable tourism, Mapo Tapo’s absolute mantra and behind the idea of financing a photo book. “When the second lockdown started we had just started with the first test trips and we decided we wouldn’t waste the subsequent months. Hence



the idea of the book, whose goal is precisely to bring sustainable tourism, and therefore development, to areas that are not yet developed”, continues Alessia. “We have worked since our inception to create a community of enthusiasts and the idea of entrusting ourselves to crowdfunding was due to the presence of this strong fan base”. Alessia and Daniele had long chats with Italian and foreign companies that had already tried the crowdfunding path: “The initial hype is very important, to generate expectation even before launching the campaign, while

maintaining a bit of mystery. And then, once the campaign has started, it is essential to have good results in the very first hours”. For two reasons: “Because showing that the campaign is having success serves to persuade other potential investors and because it fuels the platform algorithm”. In fact, successful fundraising allows a business to be inserted, as it happened to Mapo Tapo, in the very first pages of the platform, thus bringing further organic traffic to one’s own fundraiser. Finally, in May 2021, the restart of the travel activities of Mapo Tapo, which between the end of 2020 and the spring of 2021 took advantage of the acceleration program offered by **B4i - Bocconi for Innovation**: “To date, we have organized about sixty trips and have built a team of seven people”, concludes Alessia.



e sector needs

→ *Let's start from the beginning: what is Crowdfundme?*

A platform that offers investments in alternative finance to enter the equity of companies in the startup and scaleup phases.

→ *How do you select the companies to finance?*

We look at a mixture of qualitative and quantitative parameters based on three pillars. First of all, the level of innovation of the project and the ease of understanding by the market. For radical innovations we evaluate the presence of patents (therefore validation by the scientific community), while for incremental innovation projects we look for example at turnover figures, active customers, etc. Secondly, the financial situation, because, despite being young companies, they must be healthy. Finally, that all the elements of investor protection must be respected, which is also required by the law. We care a lot about this aspect and have often rejected beautiful projects for this reason. For example, we push startups to include a liquidation preference for minority investors (in the case, for example, of a depreciating exit).

→ *How many companies are selected? And how many investors do you propose them to?*

We evaluate 60 projects per month, investigate 30 and launch 4 to 5. At this time our platform sees more than 10,600 active investors and, on average, each investor makes two trades. Since we started operations in January 2016, we have made possible the financing 144 successful projects and raised € 70.9 million through 21,200 investments.

→ *In the light of your experience, what advice do*

*BENEDETTO PIRRO
Co-founder and COO of the Crowdfundme platform, after a Bocconi bachelor's degree in the Management of Innovation, he earned a MSc in Economics and Management of Innovation and Technology (with the thesis 'Has India's Growth Been Lopsided? A brief analysis of the remarkable albeit atypical growth of this subcontinent'). "Of my Bocconi years, I remember above all my classmates, Prof. Raffaella Piccarreta and the effort it took to pass civil law," he says. "My favorite subjects were industrial economics, statistics, and innovation economics!"*

you give to a young innovative company that introduces itself to investors?

First of all, don't do it in the very early stages of the project. It is true that crowdfunding should enter in the embryonic stages, but we have seen that Italian investors are rather reluctant to do so. They are more likely to enter when the company is a little more mature and structured, when it has already received an initial market validation. Let's say that crowdfunding does not have to be the first round of financing. Second very important tip: crowdfunding is played with very open cards.

The company must have maximum transparency towards investors and not keep anything hidden for fear that someone will come and copy. This is why it is useful that it has already begun to operate on the market, because in this way it will have already set up barriers to entry that avoid these risks.

Finally, an excellent company presentation is important, that must include all the information on how the capital will be used.

→ *We talked about companies, now let's look at the system: how is crowdfunding doing?*

There is no doubt equity investment in Italy is smaller compared to other countries. And it is not a question of regulation or legislation, which in fact is advanced our country. It is really an issue of financial culture. For instance, Eastern European countries, which began operating after us, are already ahead.

→ *What does this depend on?*

From the fact that they launched crowdfunding arm in arm with venture capitalists and institutional investors for the start. In Italy, 98% of the investors in crowdfunding are retail, i.e. individuals, while there is no investment from venture capital and companies. At the beginning, the motivation was that the companies to be financed were still too early-stage, but today it is no longer entirely true.

→ *What would it take?*

Courage. That institutional investors have the courage to enter the crowdfunding world more massively, also because legislation already gives all the tools to invest jointly to everyone's advantage. ■



Bocconi



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Gloria TAMBURRINO

SCHOLARSHIP BENEFICIARY
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Pierpaolo Battigalli, Decision Sciences



Adam Eric Greenberg, Marketing



Thorsten Grohsjean, Management and technology



Nicola Limodio, Finance



Letizia Mencarini, Social and Political Sciences



Marco Ottaviani, Economics



by Fabio Todesco
and Sirio Legramanti, Sahana Subramanyam @

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Pierpaolo Battigalli, Decision Sciences

Unexpected moves are the most interesting

Game theory is not limited to what we usually call a game. Indeed, it addresses any situation in which one's actions have consequences over the other participants (players). In principle, this expands the scope of game theory to almost any human interaction. There is a whole literature within game theory that is aimed at mathematically formalizing how players think, both about the others' moves and about their own. In this context, the game of mirrors produced by the I-think-you-think-I-think loop is technically called a hierarchy of beliefs. In static games – in which all the players make their own move simultaneously, once and for all (e.g. rock-paper-scissors) – such beliefs are formed at the beginning of the game and do not need any updating, since the game is over after just one move. On the contrary, dynamic games – in which the players make their moves sequentially and repeatedly (e.g. card games, chess, etc.) – require to update the players' beliefs about each other after each player's turn, based on what is observed. In a seminal [paper in 1999](#), Bocconi professor **Pierpaolo Battigalli**, together with



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Marciano Siniscalchi (now at Northwestern University), provided a theoretical framework for belief updating in dynamic games, resorting to sophisticated mathematical tools that transcend standard probability theory. However, this paper was still conceived under the assumption that all the players' moves comply with their strategic plans. Hence, if a player makes a move that does not belong to the plan that you ascribed to her, you must update your belief about her plan and conclude that her plan must be different. A new paper by Professor Battigalli and Bocconi Academic Fellow **Nicodemo De Vito** goes beyond this traditional assumption, decoupling plans from behaviors. "This produces a whole new theoretical framework that allows a justification of the backward induction algorithm, a procedure used to compute the equilibrium of a specific class of games by starting from the last stage of the game and proceeding backwards. Decoupling plans from behaviors allows us to justify this algorithm, and opens up new research directions."



THE PAPER

Beliefs, plans, and perceived intentions in dynamic games, *Journal of Economic Theory*,
by Pierpaolo Battigalli and Nicodemo De Vito

Adam Eric Greenberg, Marketing

Don't be ashamed of your financial troubles if you want to avoid... financial troubles

In a recent survey, three out of every four Americans reported being anxious about their financial situation. In a society built on the myth that people can succeed if they simply work hard enough, people who are experiencing financial hardship may blame themselves and feel ashamed of their difficulties. In a [recent paper](#), **Adam Eric Greenberg** (Bocconi University, Department of Marketing), **Joe Gladstone** (University of Colorado), **Jon Jachimowicz** (Harvard Business School), and **Adam Galinsky** (Columbia Business School) find that financial shame is a critical ingredient in the poverty trap, the vicious



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Why firms smash innovative research and development projects

Deciding which new ideas are winners and which are duds is difficult for research and development (R&D) expert panels because of personal biases and the panel decision-making process itself, according to new research co-authored by **Thorsten Grohsjean**, Assistant Professor at Bocconi's Department of Management and Technology, released in an article by *MIT Sloan Management Review*. "No one wants to be the decision maker who passes on a good investment," says Thorsten Grohsjean. "Innovation will always be tough to assess, but by creating a process that is more open, fluid, and collaborative, organizations can spot the true gold nuggets among the rocks." The article, *Better Ways to Green-Light New Projects*, provides a number of recommendations for R&D directors and expert panels to reduce biases and improve outcomes before, during, and after selecting innovation projects for investment. These recommendations are illustrated with real-world examples from leading organizations such as Amazon, Bristol-Myers Squibb, the

Defense Advanced Research Projects Agency (DARPA), BMW, Smart, Ericsson, New Zealand's Health Research Council, Siemens, Shell, and Swiss National Science Foundation. Before projects are evaluated, companies can ensure they get a fair assessment based on their merits by revising the process for submitting ideas for consideration. To combat latent biases, organizations should remove names and demographic information about the creators of the new ideas, and standardize the information required in submissions so they are evaluated based on the same criteria. During the selection process, organizations should assemble a diverse selection panel in order to ensure that the viability of an idea is considered from a broader range of perspectives. Including people with both technical and non-technical backgrounds ensures projects are evaluated on technical aspects and also on market potential, business planning, strategic fit, and financing. Companies may also find it beneficial to use crowd-sourcing principles, a workshop approach, leave it up to chance, or stage head-to-head comparisons.

Once organizations have determined which projects to fund, they can provide feedback on proposals as well as track and learn from failures in order to help decision-makers make better choices the next time.

"Although these practices may require some resources and effort to deploy, they likely cost less than the traditional model of selection, which heavily taxes senior managers' and technologists' time and effort," says Linus Dahlander, article co-author and professor at ESMT in Berlin. The article authors conducted a multiyear research project inside a global professional services firm with offices in 33 countries, collecting both quantitative and qualitative data about how they decide to invest in different innovations. In an initial study, the researchers examined how eight selection panels composed of senior managers and leading engineers allocate money to new research ideas. In a second study, they analyzed the effect of sequencing on 763 decisions made by one of the eight panels. The authors also conducted interviews with several dozen executives.



THE ARTICLE

Better ways to green-light new projects, *MIT Sloan Management Review*, by Thorsten Grohsjean, Linus Dahlander, Ammon Salter, Paola Criscuolo



VIDEO



cycle whereby the experience of living in poverty makes it hard to escape. "Shame can be especially problematic for those already experiencing financial hardship. Psychologists have found that shame causes people to hide from their difficulties. But hiding from financial difficulties has the potential to make those difficulties much worse," Professor Greenberg summarizes.

Nicola Limodio, Finance

Liquidity risk dries long term credit and hampers investments

In low-income countries, banks are the primary drivers of long-term finance but they are also responsible for its scarcity. Bocconi Professor **Nicola Limodio** and his co-author **M. Ali Choudhary**, in a paper published online in advance by the Review of Economic Studies, showed that this is partly due to liquidity risk and that, furthermore, it limits both long- and short-term investments.

In order to show that liquidity risk impacts the supply of a bank's long-term finance but not the firms' demand for long-term finance, the authors leveraged a Pakistani law applied to Sunni Pakistanis – the Zakat.

Under this law, every Ramadan, the Pakistani government collects a Sharia-compliant levy of 2.5% on bank deposits that exceed a specific deposit threshold. Importantly, this threshold is not fixed, but it is determined by the current monetary value of 612.32 grams of silver. This value is unrelated to firms' demand for long-term finance, but the price level and the volatility of silver do impact liquidity risk through a widespread phenomenon of “withdrawal-and-redeposit”. Individuals avoid the levy by temporarily withdrawing money until it is below the threshold by a small amount. So, low silver prices would imply that more individuals are above the threshold and therefore higher withdrawals can be expected. And since the threshold is announced only a few hours before the Zakat payment, more volatile silver prices would also increase deposit fluctuations.

Indeed, the authors found that bank branches in Sunni-majority cities exhibit a 5% average decline in deposits during Ramadan compared to other branches in different cities. They also found that banks exposed to higher volumes of Zakat-related withdrawal offer loans with a shorter maturity period (between 6% and 7% shorter) and that these loans are offered at lower lending rates (0.18-0.22 points lower). They are also around 14% lower in amount. To test whether such credit reallocations toward the short-term translate into lower investments, the authors created a firm-level database of imports of capital and non-capital goods along with the bank that offered the trade credit used to finance imports. Using the import of capital goods as a



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proxy for long-term investment and non-capital goods as a proxy for a short-term investment, the authors found that a decline in long-term finance forces firms to reduce their import of capital goods by 27% - 30% and to a weaker extent the import of non-capital goods by 6% - 8%. Their findings are especially useful in evaluating policies that encourage the inflow of bank deposits – and offer evidence to guide decision-making when faced with liquidity risk trade-offs. The results also make a case for better inter-bank markets and central bank facilities that could mitigate the impacts of the liquidity risk by allowing banks to smooth out their deposit shocks and uncertainties.

Letizia Mencarini, Social and Political Science

Machine learning to predict if you'll leave your partner

The life satisfaction of both partners and the woman's percentage of housework turned out to be the most important predictors of union dissolution, when scholars affiliated to Bocconi's Dondena Centre for Research on Social Dynamics and Public Policy used a machine learning (ML) technique to analyze data on 2,038 married or cohabiting couples who participated in the German Socio-Economic Panel Survey. The couples were observed, on average, for 12 years, leading to a total of 18,613 observations. During the observation period, 914 couples (45%) split up. In their article, **Bruno Arpino**, **Marco Le Moglie** and **Letizia Mencarini** (Bocconi), used a ML technique called Random Survival Forests (RSF) to overcome the difficulty to manage a large number of independent variables in conventional models.



THE PAPER

Liquidity risk and long-term finance: evidence from a natural experiment, *The Review of Economic Studies*, by M. Ali Choudhary, Nicola Limodio



Marco Ottaviani, Economics

How to regulate the introduction of vaccines and other innovative products

Introducing a new product in risky markets such as pharmaceuticals or aviation can result in large damages, if a drug or a plane turn out to be defective, but it can also produce high societal benefits, well beyond the individual gains for customers. In economic jargon, it can have large positive externalities, thus contributing to the general welfare. If they want to both incentivize innovation and avoid the introduction of unsafe products, regulators should strike the right balance between ex-ante experimentation, performed by firms before market introduction, and ex-post monitoring of effects on users, argue **Marco Ottaviani**, **Emeric Henry** and **Marco Loseto** in their latest paper. Professor Ottaviani and his co-authors design a two-phase model of information diffusion and evaluate how its outcome can be affected by three regulatory tools that evolved over the course of the 20th century: liability,



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withdrawal regulation and authorization regulation. In the first phase, firms collect information by undertaking costly experimentation to decide whether to introduce the product or abandon experimentation. In the second phase, following adoption, monitoring activities provide new, less systematic information and the product is withdrawn if sufficiently bad news about its effects is collected. In this model, the socially optimal mix of the three tools depends on how large externalities are. Even if the model was developed before the pandemic, it has implications for COVID-19 drugs and vaccines. "Our analysis suggests that drug regulators should opt for a faster approval and protect innovators against liability claims, given the large positive externality associated to the control of pandemic diseases," Prof. Ottaviani says.



THE PAPER

Regulation with experimentation: ex ante approval, ex post withdrawal, and Liability, *Management Science*,
by Marco Ottaviani, Emeric Henry, Marco Loseto

Political Sciences



LETIZIA MENCARINI
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and economics,
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detecting complex patterns in relatively small datasets. Another advantage of ML is supposed to be its superior predictive power compared to conventional models, more attuned to explaining how certain mechanisms work than to predicting the future behavior of the variables. When the authors divided their sample in two parts and used the results of the first half to predict the outcomes of the second half, they found that the predictive accuracy of RSF was considerably superior to that of conventional models. Nonetheless, the predictive accuracy of RSF was limited despite the use, as input variables, of all the most important predictors of union dissolution identified in the literature. Among the variables with the greatest predictive ability, the authors found the life satisfaction of both partners, woman's percentage of housework, marital status (i.e., married vs. cohabiting), woman's working hours, woman's level of openness, and man's level of extraversion.



THE PAPER

What tears couples apart: a machine learning analysis of union dissolution in Germany, *Demography*,
by Bruno Arpino, Marco Le Moglie and Letizia Mencarini

"A clear-cut example of the potential difficulties of considering all variables and their possible interactions concerns the 'big five' personality traits," Professor Mencarini said. "To account for both partners' traits (10 variables) and all their two-way interactions (25 variables), one would need to include 35 independent variables, which would be very problematic in a regression model." ML tools are, on the contrary, capable of

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The book by Christian Stadler, professor at Warwick Business School, is the occasion for a discussion on the theme of Open Innovation with Bocconi University Rector Gianmario Verona. Among the advantages of the open approach is that it encourages new ideas, but strong leadership is needed to govern the process and avoid chaos

by Jennifer Clark @ photo by Paolo Tonato

With “Disruption” used to refer to “just” the impact of new technology on consolidated business models. Now recent events have shown that CEOs need to consider environmental and geopolitical disruptions as well. It's clear that executive toolkits need to be continually updated in real time. One of these new tools is “open strategy,” a radically different way of developing corporate strategy that opens up the C-Suite to input from employees, outside experts, stakeholders and suppliers. The book *Open Strategy: Mastering Disruption from Outside the C-Suite* (now available in Italian from Egea) by Christian Stadler, Julia Hautz, Kurt Matzler and Stephan Friedrich von den Eichen introduces the reader to digital tools to help management open up the three stages of strategy-making -- idea generation, plan formulation, and implementation -- to outside feedback. *Sarfatti25* asked co-author Christian Stadler and Bocconi University Rector Gianmario Verona to share their views about why business strategies often fail, how open strategy can be a tool for success in a challenging environment, and why business literature has been rewritten in the past few decades.

→ The forerunner of open strategy is open innovation. But the idea of using this model for strategy is counterintuitive. What was it that convinced you it was valid?

CHRISTIAN STADLER My first reaction when I heard about it was, “wait, is this democracy?” It is not. It is like open innovation on steroids. I saw the outcomes in the interviews I did for this book. Open strategy was actually really changing something. And it started to make more sense.

GIANMARIO VERONA Clearly, we are living in an era of openness. The internet has created an era of access. Bringing these concepts to the board of directors, to the C suite, and to executive committees is a big challenge. What is convincing is the way they carry it out. We are living in an

CHRISTIAN STADLER
Professor of strategic
management at Warwick
Business School

era where this approach makes sense.

→ What is the competitive advantage of an open strategy approach?

STADLER Let's say you put together your top management, the smartest guys in the room. They should have the best ideas. But over time they start to think alike. Opening up the process allows you to find new ideas you might have missed. Some might be duds. But some will be gems. In the same way that open innovation brings together different parties to come up with better products, those who bring different points of view into this strategy conversation will probably have better ideas and better outcomes.

VERONA To give an example, the fashion industry is among those businesses that needs to deal with sustainability issues in the manufacturing process. The brands that are doing the best are the ones that have listened more to their audiences and particularly Gen Z about supply chain and environmental issues. And this per se is a bit of open strategy, right? Companies can go in this direction when working on brand identity and marketing, and some have already changed their process in order to come up with initiatives that are consistent with what the customer wants.

→ I was surprised to read that the study said that 50% to 90% of business strategies fail. What are some of the reasons?

VERONA Let me start by saying that strategy is also about failure. Strategy is also about learning, so it makes sense to fail every so often. Not too often! Companies tend to rely on things they already know. Their resources, their historical competitive advantage, is based on their past success. But we know from the examples in the book, and also from others, that things move so fast that you need to keep changing. As a professor that teaches innovation and strategy, I know very well that one of the problems for organizations is strategy implementation. You have to

convince people. The concept of openness is, first of all, within the organization. Often middle management or customer-facing staff receives top-down strategy, and there is no buy-in. If you approach them more openly to decide what is your vision, your strategic plan for the next 20 years, execution can be easier. I think this kind of openness is good, it's organic for the growth of the company.

STADLER In the book we use the example of Barclays, which is a 325-year-old bank with a UK retail staff of 30,000 people who were potentially threatened by the bank's digitalization strategy. By developing a "strategy jam" process, every one of them was involved in the discussion, and as part of the process. They figured out what it meant for them. The bank introduced a very successful app, it had about 1 million users, and it is one of the most successful fintechs in the UK.

→ *The advantages are quite clear. What are some of the skills that a leader needs to govern this new way of managing?*

VERONA I think we have rewritten the literature on business administration in recent years to reflect an evolution away from the hierarchical models pioneered 100 years ago. My point is that it's always about tradeoffs, and clearly the old way is no longer useful. A CEO now needs to listen to everyone, and then make the decision for the organization. And if you don't open up, clearly you are doing something wrong.

STADLER Try to meet the people who are different from you. If you find forums where you can make this possible, it is usually advantageous. For someone who is starting off their career, try to keep ties not just to the people above you in the organization, but also the people who don't make it up the ladder. They are the salt of the earth of their organization. And useful to have a connection to them. The last thing I would say is read a lot and read widely. A lot of people who are successful manage to carve out time. In the Netflix series "Inside Bill's Brain" you see him walking around with his canvas bag full of books. And if he finds time to read, I assume you and I can too.

→ *What are some of the main pitfalls of open strategy?*

STADLER It is important to have a strong moderator. It's easy for these conversations to drift off to football or lunch. Or people being not constructive because they have their agendas. Somebody has to keep these discussions on track. And the leadership needs to make that clear in the



THE BOOK

In *Open Strategy: Governare il Cambiamento Dirompente Uscendo dalla Stanza dei Bottoni* (Egea, 2022) the four authors Christian Stadler, Julia Hautz, Kurt Mazler, and Stephan Friedrich von den Eichen help readers understand and plan their "open strategy" process with advice on how to organize business logic contests, strategy jams, trend radars and strategic communities. Case studies range from Telefonica and Barclays to the U.S. Navy and NASA.



beginning that the process is open, but not democratic. If there is the expectation that we have a big vote afterwards, people will be disillusioned.

→ *Do you have examples of when it went wrong?*

STADLER Yes, Premium Cola. German drinks company Afri-Cola wanted to revive and distribute its original recipe under a new brand, Premium Cola. The process was set up as a democracy. There was an endless discussion, and no solutions were ever found.

→ *What should a CEO keep in mind when governing this process?*

STADLER For a small organization, the attraction is a different one than from a large company. It's harder for an SME to have access to this sort of expertise. If you are a larger company, you can simply buy it. But for a smaller one, if you are able to dive into a wide network, you can come across ideas and expertise that you would not have been able to access otherwise. For the large ones, the problem is that they are too much locked into their own mindset.

VERONA The contradictions that can rise with openness are infinite, potentially, right? Clearly you need strong leadership to govern this process and avoid chaos. You need a process, it can't be the CEO that does this herself. It could be third parties jumping in, supporting the idea generation phase, and the selection phase by using committees. It cannot just be one person running this process, and the book addresses this aspect with concrete examples.

→ *How does the role of consultants evolve in an open strategy model?*

STADLER It will evolve, which is good news for consulting companies. We are not trying to say there is no need for consultants any more. I have talked to the head of strategy in one of the big three firms about the open strategy model, and they were receptive to this prospect of a

VERONA We've already seen this evolution at work back when the internet and technology exploded. The role of strategy consultants changed dramatically in the way they served organizations and companies. They are now doing some very interesting things. ■

Christian Stadler,
author of *Open
Strategy*, and
Gianmario Verona,
Rector of Bocconi
University, during the
interview for Sarfatti25





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