

Feed.

JERÓNIMO MARTINS WORLD'S MAGAZINE

N13.
DEC 2023

POWER

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The cover of this issue demultiplies and dematerialises the word Power. At first glance, it might seem like flames heating up – almost as if they could be touched. But power is much more than the physical element: it is the incredible energy present in food, it is a hug that gives comfort, a smile that warms, a beacon that illuminates.

Power is a pulse that surrounds us.

Feed.

JERÓNIMO MARTINS WORLD'S MAGAZINE

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*THE POWER
OF ENERGY*

*TEN YEARS
OF ARA*

*AN ANCHOR
IN LIFE*

Feed.

JERÓNIMO MARTINS WORLD'S MAGAZINE

INDEX.



GUIDING VALUES

96.99

No matter how different each country, culture or history may be, Jerónimo Martins' common values move all employees in the same direction, united in a single attitude.



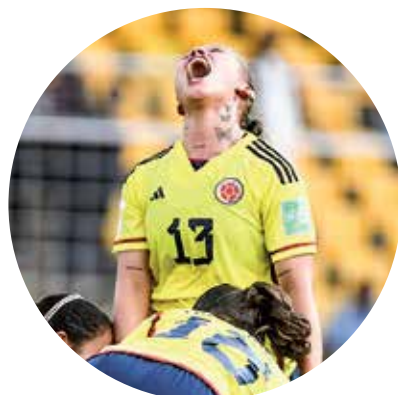
TAKING DECISIVE STEPS

Jerónimo Martins has an ambitious energy transition plan to transform its businesses in Portugal, Poland and Colombia.

POWER KICK

18.23

Inspired by a country full of talented women, Ara is the first company to support the Colombian female teams at all levels.



I KNOW THAT I KNOW NOTHING

58.63

The essence of Socrates' philosophy is that wisdom lies in understanding our ignorance.



FOOD IS ENERGY

42.47

Humans get power directly from the nutrients in food. These nutrients are converted into the energy that enables the body to function.

POWER

This edition of Feed aims to show that Power is all around us - in a wider sense that we might think. It is about energy, about taking and giving, transforming and transferring, feeding and bounding.



AN ANCHOR IN LIFE

Over one million pilgrims gathered in Lisbon in August 2023 for World Youth Day, the biggest Catholic event in the world. What is this power that moves and brings so many people together?



TEN YEARS OF ARA

84.91

Our first store in Colombia opened in 2013. Ten years later, Ara is one of the country's largest companies and a driving force for economic development.



GUT POWER

122.127

Made up of 100 million nerve cells, the gut is the brain down below - and has the ability to influence the way we behave.

WAYUU

116.121

An indigenous community in Colombia is using ancient knowledge to make handicrafts and raise money for their children's education.



AND MORE...

12.17

ONCE UPON A TIME...

72.79

MIGHTY FORESTS

80.83

ACTING TOGETHER IN MATO GROSSO

92.95

THE FIRST FEMALE FRANCHISEE IN ARA'S NETWORK

106.111

NUMBER 13, THE MOST FEARED

Editorial.



PEDRO
SOARES
DOS
SANTOS

Energy to EMPOWER people for positive change

The idea that will guide us through the pages of this Feed issue is that energy, in its many forms and shapes, is all around us and our lives depend on it. The fact that, in the English language, the word POWER is both a noun and a verb allows us to explore some of its many paths of meaning: from the ability to do or make something happen to the capacity to influence behaviours, from the capacity to supply energy to the ability to move with speed.

We want to invite you to come with us in a journey far beyond the perhaps most immediate definition: the physical energy associated

with electricity. A business like ours needs to be constantly nurtured and powered, and our ambition is to continuously reduce our environmental footprint. For that, we are making real efforts and investing hard, and some of the hidden projects that have a positive impact are featured in this magazine. Moreover, and as a food business, we will always be very interested in exploring how healthy nutritional habits provide humans with the energy that keeps us moving, thinking, performing – that keeps us alive, really.

And when we know that societies are facing such tough times and people are losing purchasing power and struggling to carry on, we must contribute to activate and unleash the social energy that exists in the human instinct for solidarity and mutual support. Marta Maia, my colleague on Jerónimo Martins' Managing Committee and responsible for our human resources strategy and policy, writes about why having the right values is so important for an organisation, and how our values have guided us through challenging times more than once in our long history. This year, 2023, we are celebrating Ara's 10th anniversary, a milestone that could not be missed at Feed, and that gave us a good reason to reflect on our Colombian journey so far and share some inspiring stories. One that is special to me is about Ara's partnership with the Colombian women's football team and how these players can set an example that empowers other women.

In one way or another, those who hold power in a large organisation always can influence and shape its culture and purpose. I know well how decisions affect the lives of employees, customers, and other stakeholders. This power can and should be used for positive change, such as investing in sustainable practices or supporting projects that go beyond the commercial goal of companies – these are some of the projects that Feed highlights. I hope that reading this issue turns out to be a source of enjoyment and time well spent.

Pedro Soares dos Santos,
Chairman of the Jerónimo Martins Group

When we know that societies are facing tough times and people are losing purchasing power and struggling to carry on, we must contribute to activate and unleash the social energy that exists in the human instinct for solidarity and mutual support.

Fresh *in*

FRESH NEWS AROUND THE WORLD



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PINGO DOCE: ALL FLAVOUR ENHANCERS AND ARTIFICIAL COLOURING REMOVED FROM PRIVATE BRAND

IN September 2023, Pingo Doce achieved a ground-breaking milestone by completing the elimination of all flavour enhancers and artificial colourings from its Private Brand products, making it the first Portuguese food retailer to undertake this commitment across its entire product range. This comprehensive reformulation effort was initiated in 2007 and resulted in 1,354 food products being free of additives by 2023. One notable example is the Pingo Doce Blue Ice Cream – tastes like marshmallow and features a vibrant blue colour from natural spirulina. This achievement reflects Pingo Doce’s

strong commitment to health through nutrition, without compromising taste. The Private Brand Quality and Development team works daily “to achieve the best recipe, both in terms of nutritional profile and in the selection of ingredients and additives.” It emphasises that although all used additives are authorised, the goal is “to eliminate the unnecessary and excludes all additives that are being reassessed or could pose a health threat if consumed daily and in larger quantities and/or by more susceptible groups.”

1.

EATING HEALTHIER WITH THE BIEDRONKA GANG MOCNIAKÓW

2.

AT the end of August 2023, just in time for the back-to-school buzz, Biedronka introduced a fresh loyalty campaign named “Gang Mocniaków” (The Mighties Gang), with a distinct focus on cultivating healthy eating habits. The campaign features a collection of 11 soft toys representing various food products, an engaging activity book, educational games accessible through Biedronka’s app and a dedicated website. The initiative continued for three months, with extensive advertising across TV, radio, outdoor, digital platforms and in-store channels. Extending support to the school community, Biedronka’s campaign also included a website providing valuable information on healthy eating for students and teachers. Educators now have teaching materials at their disposal, including short stories to read to youngsters.



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3.

PROMOTING COLOMBIAN EXPORTS

THE Jerónimo Martins Group participated in the business roundtable to recognise the productive offer of Valle del Cauca (Department of the Colombian Pacific). The event took place in November 2023 and explored marketing opportunities for agricultural products with the potential to reach the shelves of the Group’s banners in Portugal and Poland. The Valle del Cauca has an agro-industrial tradition, with sugar cane, coffee and fruits such as the Hass avocado as its main products. The commercial meetings were promoted by the diplomatic mission of Colombia in Portugal, and the Group, along with Ara, saw the initiative as an opportunity to support the economic and social development of the countries in which it operates.



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Fresh *in*

FRESH NEWS AROUND THE WORLD

THE WORLD'S BEST YOUNG CHEF IS PORTUGUESE

NELSON Freitas, age 28, was the winner of the S. Pellegrino Young Chef Academy 2023, awarded to the world's best chef under 30. The competition took place in Milan and the 15 participants were given five hours to craft and present their dishes to the grand jury, which comprised renowned chefs and gourmards such as Nancy Silverton, Vicky Lau, Hélène Darroze, Pía León and Riccardo Camanini. Nelson Freitas, representing the Iberian Peninsula, captivated them with his signature dish: crispy red mullet, sea urchin, and homemade black garlic. The panel praised him for demonstrating "respect and love for the region and its heritage, memories and traditions" and highlighted his "refined culinary skills, ingredient selection, and the dish aesthetics, along with the powerful messages it conveyed." Nelson has been a sous chef at Fifty Seconds in Lisbon.



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4.

5.

WARSAW IS THE BEST EUROPEAN DESTINATION

THE capital of Poland has won the prestigious title of the most attractive tourist destination in the European Best Destinations contest. Warsaw secured a remarkable 142,081 votes, surpassing Athens by a significant margin. Notably, 68% of votes came from outside Poland, meaning that, even excluding domestic votes, Warsaw would still have won. In total, European Best Destinations collected a record 686,244 votes from 178 countries.

The Warsaw Tourist Organization anticipated that this result would fortify the city's global standing, enabling more effective promotion in years to come. The recognition is expected to cast a positive light on Warsaw's meeting industry, attracting international interest and events throughout the year.



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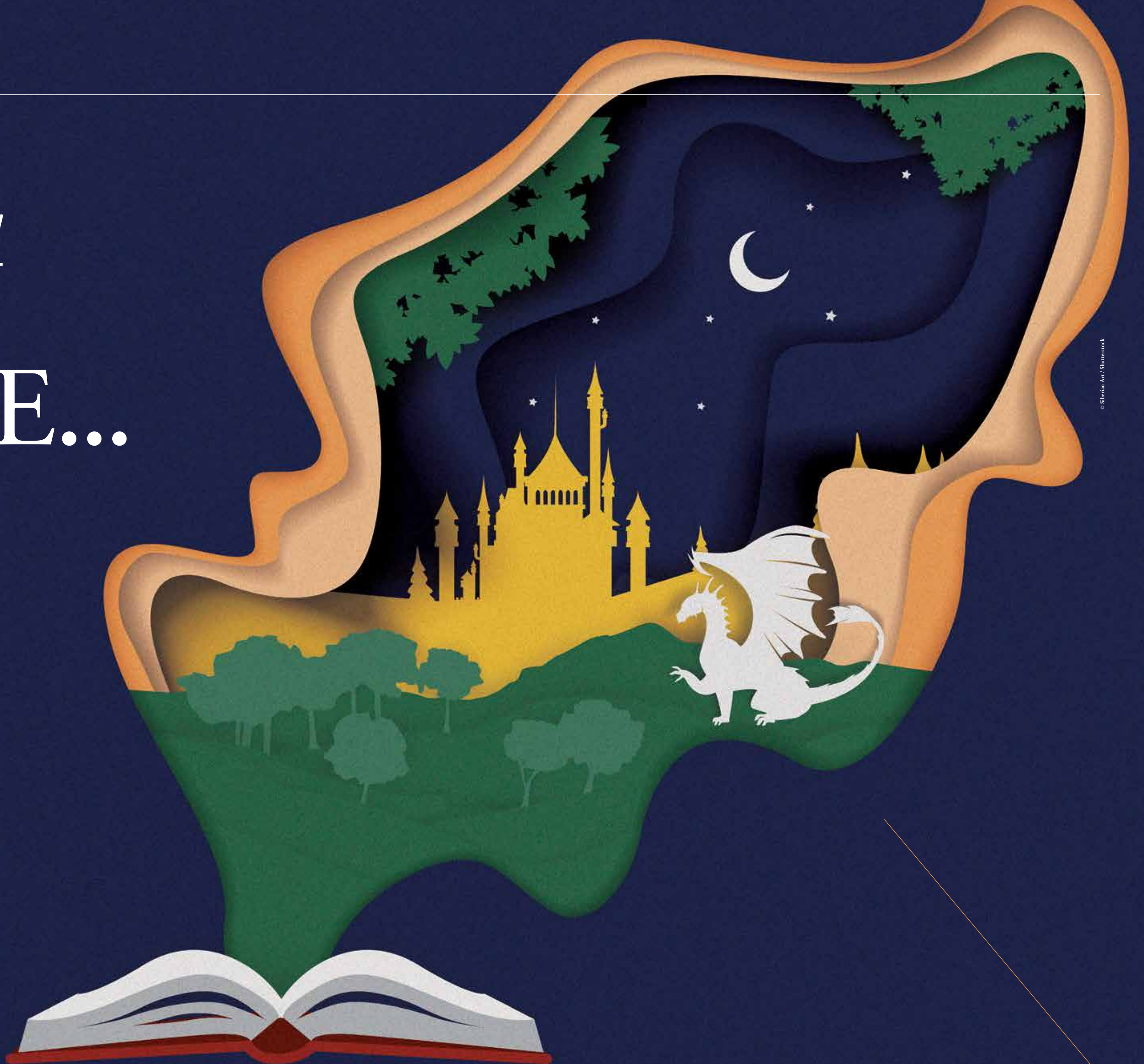
A NEW WEBSITE EXPERIENCE

FEED magazine presents its renewed website, a true mirror of the vibrant spirit of Jerónimo Martins. The modern, sleek interface allows readers to keep up with the freshest news and stories about the Group and the food retail business. Besides reflecting the Feed magazine, the website has new and exclusive articles, at a simple "click". Navigation is even more intuitive, with a menu divided into key themes: food, business, society, and sustainability. A standout addition is the video gallery, providing viewers with an immersive journey and behind the scenes content. There's also a newsletter to subscribe for everyone who wants to be the first to know it all and get exclusive content by email. Step into this new window on the matters and trends shaping our world and feed your curiosity.

6.

ONCE UPON A TIME...

People have always craved stories and created unique ways to tell them. Stories to entertain, to influence, to inspire. Stories have more impact on the human brain than data and numbers because they are easier and more pleasant to remember.



© Siberian Art / Shutterstock

AVIDLY EVER AFTER

AS the moon rises in the night sky, it's time to snuggle under cosy blankets, with eager anticipation dancing in the eyes. Beside the bed, as the tale unfolds, the outside world dims. And the bedroom is suddenly a castle, a pirate ship, a far-off land of enchantment. Through the magic of storytelling, children explore realms they might never physically visit, engage with characters that seem to be more than mere imagination and embark on adventures that conjure an entirely new reality. They're not just listening to a bedtime story; they're experiencing it. The power of stories rises above the boundaries of spacetime, their existence probably predating the advent of written language. From cave paintings to modern TV fiction, stories have shaped civilisations, imparting wisdom, conveying values and inspiring change. Stories are a spell for the senses, provoking thoughts and evoking a range of emotions that resonate long after "The End". Engaging stories trigger a phenomenon called "narrative transportation", leading to real, measurable effects on the brain's connections and chemistry. The prefrontal cortex, responsible for cognition and understanding, absorbs and stores story information, while the amygdala, responsible for emotions and long-term memory, encodes the data based on the emotional response experienced. The chemicals released during story experiences are often described as the "Angel's Cocktail", combining dopamine, which encourages positive emotions, motivation, and focus; oxytocin, which fosters bonding, trust and emotional connection, driving compassion and empathy toward the characters; and endorphins, which induce relaxation, happiness and creativity, particularly in funny or feel-good narratives that inspire positive action.

Engaging stories trigger a phenomenon called "narrative transportation", leading to real, measurable effects on the brain's connections and chemistry.

CINDERELLA, WALKING ALONG THE STREET

The striking similarity found between stories told centuries ago and those people still enjoy today is truly remarkable. One such timeless narrative pattern is the hero's journey, encompassing a hero's call to adventure, trials, transformation and the victorious return with newfound wisdom or a valuable boon. It has recurred for millennia, from the Epic of Gilgamesh — engraved on ancient Babylonian tablets 4,000 years ago, making it the oldest surviving work of great literature — to the modern space odyssey of the Star Wars saga.

In folktales, while a certain story may undergo slight variations with each retelling, some elements of folklore remain consistently present. One such element is the standard opening, as seen in phrases like "Once upon a time...", "A long, long time ago...", "There was a time when...", "Once...". *Cinderella*, a beloved Western fairy tale, exemplifies more of these enduring elements. It embraces the universal appeal of a rags-to-riches narrative and the timeless theme of good triumphing over evil, not to mention the belief in "and they all lived happily ever after." Walt Disney popularised this story through his 1950 film, yet there are over 700 different variations found across the globe. The Brothers Grimm's version, titled *Aschenputtel* (Ash Girl), was first released in 1812 in their well-known German collection *Kinder-und Hausmärchen* (Children's and Household Tales).



The Epic of Gilgamesh, engraved on ancient Babylonian tablets 4,000 years ago, is the oldest surviving work of great literature.

Many folktales are much older than previously thought. Cinderella's roots can be traced back to China's Tang dynasty (618-907 AD), where a remarkable parallel tale known as *Yeh-Shen* is often considered the world's oldest Cinderella story. In this ancient Chinese version, the protagonist triumphs over an evil stepmother, aided by a golden slipper that transforms her rags into exquisite attire, enabling her to wed a wealthy king. A modern reinterpretation of this classic fairy tale is the successful romantic comedy *Pretty Woman* (1990), featuring Julia Roberts as Cinderella and Richard Gere as Prince Charming. The film also explores the transformative power of love and hope and the conquest of personal growth and self-worth.



Pretty Woman (1990), featuring Julia Roberts as Cinderella and Richard Gere as the Prince Charming.

AN INESCAPABLE PRESENCE

Storytelling is not confined to oral tradition, books and films, it's everywhere: in the way people share anecdotes at dinner tables or on social media, in the news stories that shape our worldview, and even in the ads that entice people to buy products: everyone crafts and consumes stories constantly.

In the business world, storytelling is a powerful tool for conveying messages with impact. An emblematic example is Apple, which went from being a garage-based startup to a tech giant. This remarkable journey encapsulates a story of innovation and disruption, echoing the sentiment of Steve Jobs, who once proclaimed that “the most powerful person in the world is the storyteller.”

To master the craft of storytelling, the intricate nuances that make a narrative truly engaging must be recognised and navigated. An invaluable guide on this journey is the framework of the “Seven Deadly Sins of Storytelling” from IDEO, a leading design thinking company.

These rules are widely used in workshops, seminars and articles on storytelling and presentation techniques. The first sin, “Excessive Throat Clearing”, stresses the importance of captivating the audience from the start instead of indulging in lengthy introductions. “Professional Boring Mode” emphasises the role of genuine emotion in engaging storytelling. The third sin, “Reading the Slides”, warns against overloading PowerPoint slides with text and encourages active engagement. “Failure to Rehearse” underlines the need to prepare for a successful presentation. “Living in the Abstract Space” highlights the power of specific, sensory details relevant to the message in order to make the story resonate with the audience, paving the way for compelling and memorable narratives.

Stories help people to connect, to transcend space and time, and are as enduring as the thread that binds the pages of the ever-evolving book of Humanity.

7 DEADLY SINS of STORYTELLING

Source: IDEO.com

1. *Excessive Throat Clearing*
2. *Professional Boring Mode*
3. *Reading the Slides*
4. *Failure to Rehearse*
5. *Living in the Abstract Space*
6. *Not Knowing Your Audience*
7. *The Non-ending Ending*



Joanna Czarny, in the writing category, and Aleksandra Lipka, in the illustration category, won the 2023 Biedronka Literary Competition, with the book *Cheesecake with Stones*.



Márcio Martins, in the writing category, and Cláudia Abrantes, in the illustration category, won the 2023 Pingo Doce Literary Competition, with *The book that didn't know what it wanted to be*.

PROMOTING LITERATURE AND READING HABITS THROUGH APPEALING STORIES

Reading can improve literacy, which is the basis for learning and communication. It broadens people's horizons and perspectives, exposing them to different ideas, opinions. It helps to strengthen social cohesion and ultimately, it can support democracy and human rights. Reading habits are beneficial for individuals, but they are also peaceful weapons to help create informed societies – one of the aims of the Jerónimo Martins responsibility policy. That is why we promote children's literature to foster early family reading habits and nurture child literacy. Every year, Pingo Doce and Biedronka hold children's literature competitions that encourage the emergence of new authors and illustrators. The winners of the two stages of the competition – writing and illustration – are guaranteed publication of their work, which is sold exclusively in Group stores. In both the Pingo Doce Children's Literature Prize and the Biedronka Piórko Prize, each winner receives a cash prize of 25,000 euros. Since their creation, more than 140,000 books have been sold at very affordable prices in Portugal and more than 465,000 in Poland.

In 2023, more than 3,000 entries were received for the text stage and 800 for the illustration stage of the Pingo Doce Children's Literature Prize. *O Livro que não Sabia o que Queria Ser* (*The book that didn't know what it wanted to be*) by Márcio Martins (text) and Cláudia Abrantes (illustration), won the tenth competition. The Polish Children's Ombudsman has sponsored Piórko (Biedronka Children's Literature Prize) since it was first held. In 2023, the ninth competition received more than 2,000 entries. Joanna Czarny's *Sernik z Kamieniami* (*Cheesecake with Stones*) story served as an inspiration to more than 750 illustrators, who applied for the second stage of the prize, the winner of which was Aleksandra Lipka.

Biedronka is not only supporting new writers and illustrators, it also engages in the promotion of reading – one of the Company's social activities. Starting on 29 September, the Polish National Read Aloud Day, Biedronka organised the Read Aloud Week for the third time. While shopping inside the stores, customers were able to hear a fragment of *Cheesecake with Stones*, read by Wiktor Zborowski, who is also one of the Piórko judges.

POWER KICK

*Are female footballers as much sport stars as their male counterparts?
Since the 2023 World Cup, the answer to this question is no longer a surprise.
What's more important in Colombia is that they show that dreams can come true.*

MOVING THE GAME FORWARD

Creemos (we believe) is a slogan that fits Ara and the Colombian national team perfectly. The women's team's journey combines their ambition with Ara's belief that it is possible to go further.

In her essay, *A Room of One's Own*, Virginia Woolf wrote "No need to hurry, no need to sparkle, no need to be anybody but oneself" and nothing more clearly and faithfully reflects this than the individual determination that has enabled a handful of Colombian women to shine while being themselves, in a male dominated sport like football, which has traditionally put up barriers to their advancement.

Those who have witnessed this long struggle by a host of unsung female heroes at close quarters can tell us how hard this road has been to travel and how many women have thrown themselves heart and soul into following their dream and fulfilling their destiny. The dream of representing Colombia's tricolour flag in a woman's football team.

Women's football is a very recent phenomenon in the country and its story is one largely told without any formally organised league, because only in 2016 did the Colombian sporting authorities and their associated clubs agree to a professional league for women's teams.

Connoisseurs of the beautiful game will give them the place they deserve in history for having reached the quarter finals of a World Cup tournament only seven years after the founding of the women's professional league. A league which is now starting to learn and think for itself, if you draw the parallel with a child taking its first steps into the wider world.

Ara's focus is on the twenty-three heroic women who made their way to the quarter finals of the World Cup in Australia and New Zealand, beating some of the best teams in the world, some of which have had leagues and professional players for more than 30 years. These are women who have fought tooth and nail to overcome all the obstacles in this male-dominated sport and who, by believing in themselves and their abilities, in the determination that has brought them that far, have won themselves a place in the annals of sporting history and represent the diversity of their beautiful home country.



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Supporting the development of women is the first step towards contributing to economic, social, educational and environmental development.

The twenty-three players making up the Colombian national team are drawn from far and wide across this country of 1,142 square kilometres, representing nine of Colombia's thirty-two departments. From Lórica en Montería in the north of the country to Jamundí in the Cauca valley and the gorges of Risaralda in the west, they all have stories of overcoming adversity, self-esteem and dreams that are the pride of Colombia's sporting traditions. Catalina Pérez, recently signed by Werder Bremen in Germany, is a native of Colombia's capital city, Bogotá. She is the national team's goalkeeper, but not many people know that she works in a leading bank in the financial sector and was close to abandoning professional football because of a knee injury. Sandra Sepúlveda is a key player for Deportivo Cali, the team from the capital of the Valle department in Colombia, and combines her elite training regimen with a master's degree in physical education, recreation and sport, and plays alongside others, like the powerful number 10 in the squad, Leicy Santos, who today plays for Atlético Madrid in Spain, or Manuela Vanegas, a leading defender for Real Sociedad in Spain. They combine their commitments as professional players with the dream of transforming the lives of vulnerable young people in their home districts of Córdoba and Antioquia, through charities they have built up with their families and friends, inspired by their vision for a better country, supporting more than 200 young people aged 5 to 17.



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Each of them is a powerhouse of determination and above all a will for change you could write a book about, but it would have to be called *The Power of Believing*, of working together and being supported. A book that would undoubtedly tell how we can achieve all our goals when on our journey we decide not to arrive perhaps as quickly as we would if we travelled alone, but definitely closer to our target if we travel together.

This is why, inspired by a country that dares to dream, full of talented women looking for people to believe in them, Ara decided to be the first company to support the women's teams at all levels through exclusive sponsorship in Colombia and decided to invite all Colombians to pull together to support them, as they represent the country's flag at the highest levels of global sport. Because, as we have repeatedly said, just because we were the first, it doesn't mean we want to be the only ones.

"Ara is a young brand which, after only 10 years in the country, is already recognised by more than 98% of people in Colombia. What's more, it's firmly convinced that supporting the development of women is the first step towards contributing to economic, social, educational and environmental development on the basis of fairness. In doing this, we work with those who share our values, which underpin our brand," says Maithe Sarasua, marketing director at Ara.

In deciding to sponsor sports teams and/or events, brands like Ara are able to associate themselves with the values and excitement of sport, but also to identify with the deeper tensions and issues they point to. Sponsorship that limits itself to celebrating the winners and ignoring the immense power of consistently committing to responding to the needs that lie behind causes such as women's sport is a thing of the past.

EACH PLAYER WILL BE AN INSPIRATION FOR ALL WOMEN AND GIRLS

Feed spoke to Maite Sarasua, who has been the driving force behind this initiative and told us about the reasons for this partnership and what it sets out to do.



Ara created in-store and social media campaigns to inspire women all over Colombia.



Socio Oficial de las Selecciones Colombia Femeninas de Fútbol

WHY DID ARA DECIDE TO SPONSOR COLOMBIA'S WOMEN'S FOOTBALL TEAM?

In Colombia, only 38 out of every 100 women play sports and this, combined with the country's heartfelt love of football, made us want to get involved in this great celebration of the game by pinning our colours to the women's team, not just encouraging Colombian men and women to support their team, but also showing that participation in sport is part of a positive lifestyle, complementing a healthy diet and contributing to people's well-being.

As sponsors, our hope was to raise the profile of the team and of these determined women, helping to promote women's sport in general. We are confident that each player will be an inspiration to all the country's women and girls, whether they decide to pursue a career in sport or take up healthy habits through good food and exercise.

WHAT'S BEEN IMPORTANT ABOUT ARA'S SPONSORSHIP OF THE WOMEN'S FOOTBALL TEAM?

In the first place, Ara was the first company to exclusively promote the country's female national football team. The company remains committed to encouraging sport. Combined with a healthy diet, it's fundamental for a healthy lifestyle. Secondly, our support goes far beyond the playing fields. We want to contribute not just to the players' development as professionals, but also to have a positive impact on their home communities, which have faced particular difficulties. Between 28 July and 25 August, we provided 500 food parcels for their communities, for which the players and the technical team handed out cards. And we're also supporting lunches and refreshments for football academies for children and young people, on holiday courses organised by the federation.

Through our sponsorship we want to bring hope and security to many young women and girls eager to develop their sporting skills and, in general, in the roles they choose in their daily lives.

WHAT OTHER ACTIVITIES HAS ARA GOT PLANNED IN RELATION TO THIS SPONSORSHIP?

We've decorated more than 1,200 stores in the colours of the Colombian flag. And we want to promote our talented players in all our stores spread over more than 340 municipalities: we have displays of photos, telling people their names, hometowns and something of their life stories. We're also learning about their charitable work in organisations promoting sport and supporting children and we're looking at how we can get involved.

HOW DO YOU THINK THE WOMEN DID AT THE WORLD CUP?

They did a fantastic job representing Colombia at the 2023 World Cup in Australia and New Zealand; it was truly exceptional. Just to have got there was a huge achievement and the hope and excitement they brought to the whole country by getting through to the quarter finals was absolutely incredible. Especially when we remember that Colombia has only had a professional league since 2016 and that there are still huge shortcomings in the support they need.

WHAT HAS THIS PARTNERSHIP MEANT MOST TO PEOPLE AND WHAT IS ARA HOPING FOR FROM THIS EFFORT?

The power of believing, I can say with confidence; I think that believing in them, in the women of Colombia, believing in the country, is the way to secure the future we aspire to. As a brand, but more importantly as a Group, we believe in positive leadership and that it's possible to change our world. One thing I've always believed in life is that dreams without goals are just dreams and that without discipline and consistency, we'll never achieve our goals. I would also add that alone, we will probably get there faster, but together we will undoubtedly always go further.



INTERVIEW

MAITE SARASUA

MARKETING DIRECTOR AT ARA

Ara supports Colombia's female football teams, in an unprecedented partnership.



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The **POWER** *of* **ENERGY**

Energy cannot be created or destroyed; it is transformed by the application of force – even when a hypernova explodes in deep space.

The way energy flows depends on the context in which it is used.

In ecosystems, it is through the food chain; the human body is energised by food. And to transform societies, solidarity is the fuel that drives social energy.

The road to
**CLEAN
ENERGY**

© Mike Mareen / Adobe Stock

Europe wants to be the first carbon-neutral continent and to assure the security, competitiveness, local production and the sustainability of the energy consumed.

ALMERÍA, southern Spain, July 2023. The thermometers hit 45 °C, a temperature where life has to be put on hold, and the authorities advised people to take shelter during the hottest hours of the day. At the same time, 30 km to the north of the city, scientists are excited about the 1,400 °C they have succeeded in reaching in an area given over to energy trials and research.

This is in the Tabernas desert, next door to Fort Bravo, the studio city built in the nineteen sixties as the location for many of Hollywood's greatest blockbusters. Its more recent neighbour, the Almería Solar Platform, is the largest structure of its kind in Europe. A series of mirrors reflect the sunlight on to a specific point on a 43-metre-high tower – and are able to create an extraordinary level of heat.

This is one of the projects funded by the European Union in the search for solutions to speed up the transition to clean energy. The way ahead will involve replacing current sources of energy based on coal, oil and gas – responsible for more than 70% of global greenhouse gas emissions – with 100% renewable or clean sources, free of carbon emissions, or with very low emissions. These sources may be wind, solar, hydro or geothermal power, energy from waves or green hydrogen. Many of these already exist, but not yet on the scale needed. The decades ahead will see heavy investment in a new economy that is gaining strength.

General view of the Almería Solar Platform in Tabernas Desert, southern Spain.



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Feed. THE POWER OF ENERGY

JERÓNIMO MARTINS WORLD'S MAGAZINE

The paradigm shift will be the “beginning of the end” for fossil fuels, as the International Energy Agency (IEA) has warned. Writing in the *Financial Times*, Fatih Birol, executive director of the IEA, said he assumes that global demand for oil and gas will start to drop before 2030, earlier than envisaged, and that this change is due to “spectacular growth in clean energy technologies, such as solar panels and electrical vehicles, because of structural changes in the Chinese economy and due to the ramifications of the global energy crisis” with solar and wind power dominating growth in power networks. However, the IEA admits that the decline in the relative importance of oil, gas and coal will not halt the pace of planetary warming by itself; it is also fundamental to have “significantly stronger and faster political action from governments”.

In the case of the European Union, the aim is clear: Europe wants to be the first carbon-neutral continent and to assure the security, competitiveness, local production and the sustainability of the energy consumed. There are two EU targets: to cut new greenhouse gas emissions by at least 55% by 2030 (in comparison with 1990) and to achieve carbon neutrality by 2050.

Nuclear power plants in France generate around 68% of the country's annual electricity production, which is the world's highest share. The Cattenom plant, in the picture, has been operating for more than 35 years and employs over 2,000 people.



© PHILETDOM / Adobe Stock

European leaders have accepted a policy that involves diversifying energy sources and relies on cooperation between Member States to assure the security of supply. The dependence of many countries on natural gas from Russia, which was laid bare by the war in Ukraine, points to the need to move towards free movement of energy within Europe, with appropriate infrastructure and no regulatory barriers.

Also on the table is nuclear power, a controversial issue that divides opinions on whether it can be seen as a “green” energy source. In terms of emissions, nuclear is regarded as a clean source, as it produces no carbon emissions; on the other hand, it is not a renewable energy source, because the main fuel used (uranium) is a limited resource, extracted from the ground and existing only in certain locations.

However, the main concerns relating to nuclear power have to do with safety. What should be done with the spent radioactive fuel from reactors? In the absence of a definitive and risk-free way of disposing of this fuel, the question will always be asked. This is a question where political decision-making can be more or less sensitive to public opinion. It is not unusual for extreme positions to be taken in the debate on nuclear power.



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After more than 60 years of planning and development, the Alqueva hydroelectric power station, located in Alentejo, Portugal, started operating in 2004 and has changed the landscape of the region.

Cities play a crucial role in achieving climate neutrality by 2050, the goal of the European Union. They take up only 4% of the EU's land area, but they are home to 75% of EU citizens.

The use of hydrogen, a chemical element which is abundant in nature, will be less controversial. Harnessing hydrogen entails breaking down water into hydrogen and oxygen, using an electrical current. “Green hydrogen” is obtained using renewable electricity sources (solar, wind or hydro), in other words, without emissions of carbon dioxide into the atmosphere. Hydrogen is easily stored and can be transformed into electricity or fuel – this may prove to be a way of decarbonising means of transport such as heavy goods vehicles, planes or ships. The transition involves not just energy production, but also consumers. Households, industries, services and communities will have to learn to be more mindful of their consumption. The financial cost will be huge. In 2022, 1.7 trillion dollars was invested in clean energy, almost double the investment in fossil energy. The tendency is for this to increase, at an accelerating pace. The investment has to be weighed against the cost of doing nothing.

THE SWITCH IS ON

In twenty-five years' time, Poland will no longer be able to use its largest source of energy. Coal will be phased out in the country by 2049, leading to a new paradigm in energy production. Structural changes in natural gas supplies due to the war between Russia and Ukraine have only accelerated the search for new sources.



POLISH ENERGY TRANSFORMATION



Zakrzówek lake with steep cliffs in place of former flooded limestone quarry. Recreational place with swimming pools, restaurants and other facilities under construction. Kraków, Poland.

POLAND

joined the European Union in 2004 and since then there has been dynamic development in the country. Energy is an integral part of development and the structure of energy consumption is determined by available natural resources. In Poland, the dominant sources of primary energy are anthracite (35%) and lignite (10%), which are mined in the centre and south of the country, and these resources still constitute energy sovereignty. Around 80,000 people are employed in the mining sector. According to an agreement between the government and the unions, it is planned to phase out coalmining in Poland by 2049. This decision represents a significant challenge for the entire energy sector and will require essential socioeconomic changes in the mining regions of Poland.

Another source of primary energy is liquid fuel, i.e. crude oil and petroleum products (22%) – excluding biofuel – and natural gas (16%). Poland's crude oil and natural gas are sourced from foreign suppliers and the country has gradually been reducing its dependence on supplies from the east, in favour of increasing supplies of liquefied natural gas (LNG). In the structure of Poland's natural gas supply, imports from Russia accounted for the largest share. According to Eurostat data, Poland's natural gas consumption in 2021 was 23.3 billion cubic meters (bcm) and the import dependency ratio was 83.6%, but still lower than the EU average. It is estimated that in 2022, gas consumption in Poland fell by around 17% year-on-year. At the end of 2022, the last contract for

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natural gas supplies from Russia expired. Supplies from this direction were replaced by LNG supplies from Qatar, the USA and Norway to the Świnoujście gas port (transmission of 7.5 bcm/year) and the launch of the new Baltic Pipe pipeline (transmission of 10 bcm/year). The Baltic Pipe pipeline enables the transport of gas from gas fields in Norway to Denmark and Poland, as well as to neighbouring countries. In addition, work is underway on the Poland-Lithuania and Poland-Slovakia gas connections.

Due to the gas supply challenge, it has been decided to reduce the role of gas in the Polish energy sector. New forecasts predict that gas consumption in power plants and cogeneration (combined heat and power, or CHP) will be reduced by around 37% in 2030 and around 45% in 2040.

RENEWABLES CONQUERING MARKET SHARE

The move towards increased use of renewables in the energy sector is progressing gradually. Currently, renewable sources account for 15% of the primary energy balance. At the end of 2022, Poland's renewable power capacity accounted for 22.7 GW, of which more than 55% was solar, 35% wind, 4% biomass, 4% hydropower and approximately 1% biogas. The level of renewables in the structure of net domestic electricity consumption is expected to reach at least 32% in 2030, primarily as a result of the expansion of photovoltaic and offshore wind farms, which, due to economic and technical conditions, have the greatest prospects for development.



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Share of renewable sources in Poland

15%
in 2022

32%
in 2030

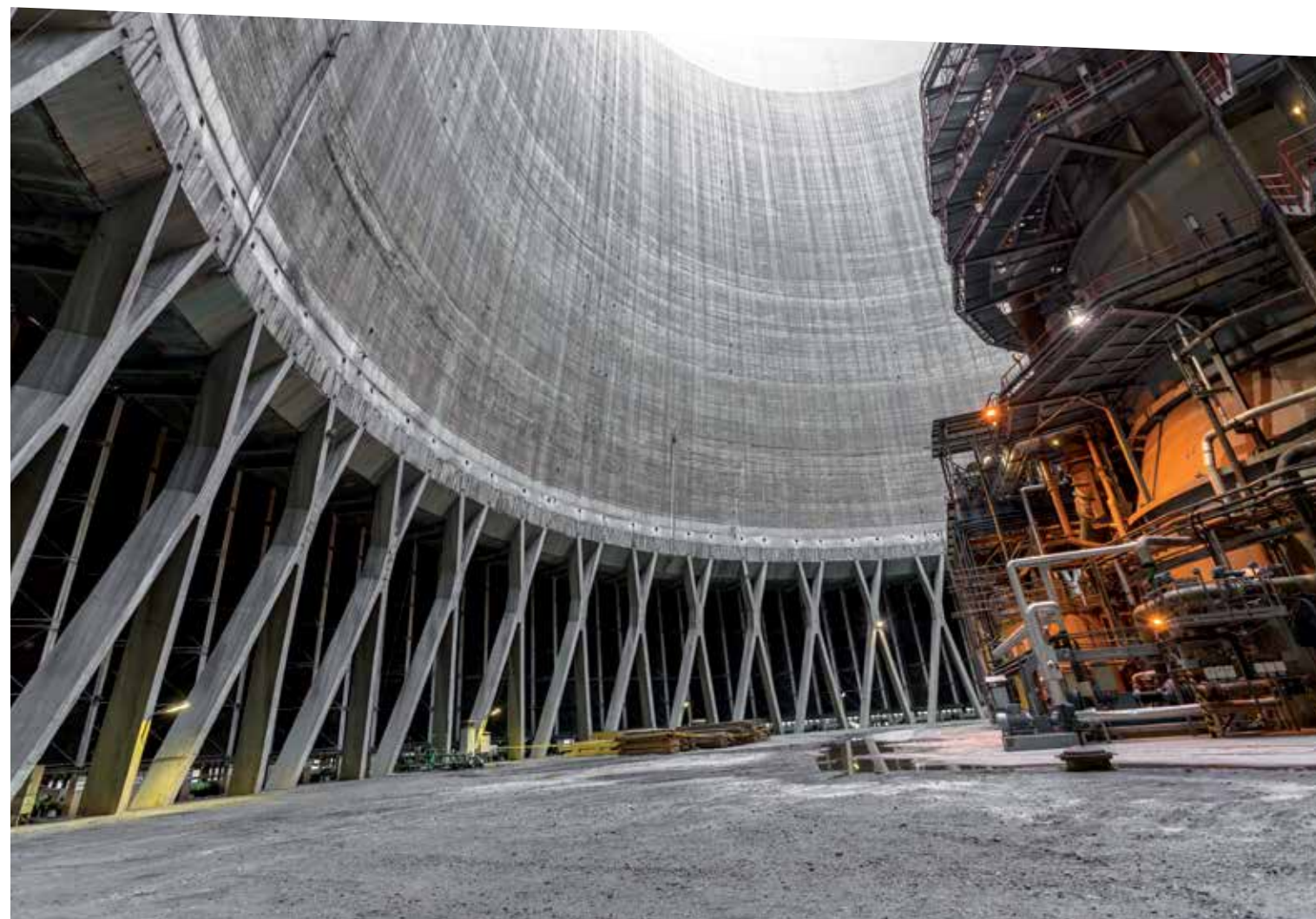
One gigawatt of power provides enough energy for 700,000 households for one year.

The main goals of Poland's Energy Policy until 2040 emphasise long-term energy security, reducing greenhouse gas and air pollutant emissions, increasing energy efficiency and decarbonisation of the transport system.

The progressive electrification of the heating and transport sectors will result in a significant increase in demand for electricity. Meeting this demand will require considerable expenditure on the modernisation of electricity grids and district heating networks. Local balancing, the construction of energy storage facilities and the development of intelligent energy management systems and equipment are the key directions for the success of the energy transition and decarbonisation of the Polish economy.

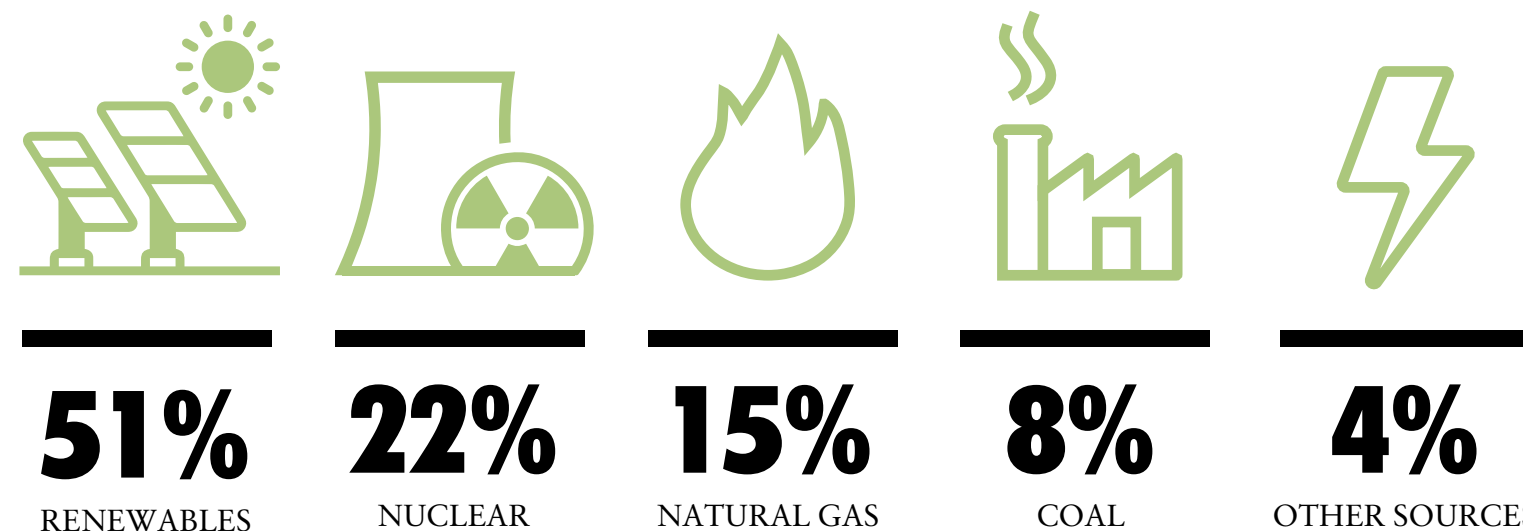
NUCLEAR POWER ON THE WAY

Nuclear energy could play a significant role in the country's electricity supply and Poland is planning to open its first nuclear power plant. In September 2023, the contract for the design of the first nuclear power plant in Poland was signed. Construction of the plant will begin in 2026, with the first unit to be commissioned in 2033. Poland's goal is to have the first reactor with



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ENERGY MIX IN POLAND *by 2040*



a capacity of between 1 GW and 1.6 GW in operation by 2033 and six reactors with a total capacity of 6 to 9 GW by 2043. It is estimated that by 2040 the share of nuclear power in energy generation could be higher than 20%.

There are also plans for the development of a hydrogen economy. The expected support will only cover low-carbon hydrogen (known as green hydrogen), i.e. from renewable sources and created using zero-carbon technologies. It will be possible to obtain some support for hydrogen production from fossil fuels (known as blue hydrogen), provided that carbon capture technologies are used. It is estimated that there will be 2 GW of installed capacity for the production of hydrogen and its derivatives from low-carbon sources in 2030, including the installation of electrolysers, having between 800 and 1,000 new hydrogen buses running in the country and at least 32 hydrogen refuelling stations.

The forecast for electricity demand in 2040 predicts that more than 73% of the power capacity will come from zero-emission sources, with 51% of this coming from renewables and 22% nuclear. Gas will account for 15%, coal for 8% and 4% from other sources, like biogas and biomass.

HUGE INVESTMENTS AHEAD

As a result of this profound transformation of the fuel and energy sector, energy costs may increase. It is important that the way the transformation is carried out ensures socially acceptable energy prices and does not exacerbate energy poverty.

Equally important is the challenge of preparing the right workforce to carry out the transition, as well as the problem of managing workers from the fossil fuel sector. It is also necessary to prepare society and administrations at various levels for the energy transition. Therefore, information and training activities in broad groups of society are necessary and inevitable.

A key problem from the point of view of Poland, as a country with relatively low energy efficiency and at the same time a high share of fossil fuels in total primary energy consumption, is the financing of the costs of the energy transition.

The strong position of the fossil fuel-based energy sector and the relatively low public awareness of climate protection are the main barriers to the transposition of European directives into Polish law and resistance to the Fit for 55, a European legislation package that refers to the EU's target of reducing net greenhouse gas emissions by at least 55% by 2030.

taking DECISIVE STEPS

The food industry is inspired by nature, and preserving it is more than just a responsibility – it is a vital mission. Our energy transition plan is ambitious and we are transforming our businesses in Portugal, Poland and Colombia.

THE time is 8:58 pm at your nearest Pingo Doce store. The outside lights are on. Inside the store, minutes away from closing its doors, the final preparations for locking up are being made. The floor is clean, the fish, meat and cheese counters have been carefully washed, and staff take a last look around to check that no task has been left undone. At the end of another day, the last one out turns off the light. But in food retail, there are lights that can never go out. Not all tasks are limited to working hours. For example, staff clock in and clock out again at the end of their shifts, and there are opening hours for our customers. But there is a silent form of work that goes on in all our stores, 24 hours a day: the task of conserving the food we offer our customers. Every day, hundreds of refrigerated display cabinets, freezers and cooling systems ensure that, in the over 5,500 stores that we operate in Portugal, Poland and Colombia, items such as dairy products, fresh produce, ice cream and frozen meals are conserved so as to guarantee maximum food quality and preserve food safety – up to the moment somebody puts them in their trolley. This is just one example of how energy is needed on a continuous basis in food retail, not just in the store, but in warehouses, production processes and transport. Because we know that only efficient consumption of natural resources can protect the ecosystems essential for sustainability, decarbonisation is the main priority in our strategy for a responsible business. With the aim of cutting greenhouse gas emissions, the Jerónimo Martins Group Climate Transition Plan is under way in our operations in Portugal, Poland and Colombia.



Feed. **THE POWER OF ENERGY**

JERÓNIMO MARTINS WORLD'S MAGAZINE



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DOING THE JOB WITH NEVER-ENDING ENERGY

By 2030, 60% of the energy we consume will be from renewable sources. Our plan is to increase renewable power generation for our own consumption, to purchase renewable electricity from power companies and to obtain renewable energy certificates that guarantee that the energy we consume is from a source emitting no greenhouse gases. Biedronka is currently working on a project to install photovoltaic solar panels at around 2,000 stores. The solar power will be for in-store consumption. In 2022, close to 120 establishments producing their own solar power avoided 2,311 tonnes of carbon dioxide emissions. Pingo Doce, Ara and Recheio also have plans for adding photovoltaic solar panels to their stores and distribution centres, which already prevent the emission of 1,850 tonnes of carbon dioxide annually. Most stores in Portugal are installing heat exchangers that use the hot air generated by cooling equipment to heat water for sanitary use, like bathrooms and hand washing.

GOING ELECTRIC

Using electricity rather than fossil fuels has become an important way of addressing climate change. Liquid and gaseous fossil fuels account for less than 15% of our total energy consumption, but we are keen to use more electric vehicles and to invest in the use of cleaner combustion technologies, for example using biofuels. We are also offering our customers a warmer welcome, with charging stations for electric vehicles available in more and more of our store car parks.



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KEEPING IT (NATURALLY) FRESH

In our refrigeration and air conditioning systems, our aim is to only use natural coolant gases or gases with low global warming potential by 2030 in Portugal and Poland, and by 2035 in Colombia, and install leak detection and control technologies. We will do this by substituting systems and installing new refrigeration equipment.

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INVOLVING THE COMMUNITY

Showing the way is often the best way to lead. We work with our staff, customers and our local communities to raise awareness of the need to protect the environment.

As signatories to the Portuguese Plastics Pact, Pingo Doce and Recheio have signed up to the “Recycle your Plastic” campaign, educating customers about how best to separate plastic waste. Ara has tackled the same issue, launching its “Let’s do it together” campaign in 2022, encouraging people to switch from single-use plastics to reusable bags. In order to fight food waste at home, Biedronka has launched a project with the slogan “Smart people don’t waste, they save food!”.



OUR AMBITION:

55%
reduction in absolute greenhouse gas emissions in own operations by 2031 (taking 2021 as the baseline)

60%
power consumption from renewable sources by 2030

BY 2050
carbon neutrality in our operations and value chain (scopes 1 and 2)

BRINGING NEW LIFE THROUGH CIRCULAR ECONOMY

We believe that, in nature, “nothing is lost, everything is transformed” and so the circular economy, which means producing less waste and recycling more, has been a priority. In 2022, we recovered 85.5% of all our waste. The Ecodesign project sets out to develop Private Brand products with more sustainable packaging, reducing the environmental impact of production, transport and waste management. Between 2011 and 2022, we made changes to 1,156 products, thereby avoiding 36,250 tonnes of materials (5,700 tonnes of carbon dioxide not emitted). In order to fight food waste, our initiatives include regular donations to institutions, using so-called “ugly” vegetables in products such as soups, available at stores in Portugal, and markdowns on products nearing their best before dates, at Pingo Doce and Biedronka.

TURNING BUILDINGS “GREEN”

You might remember a time when you needed to wrap up to visit the yoghurt aisle... Today, the freezers and the cabinets for displaying fresh milk, ice cream and cheese have doors that close. The reason is simple – it’s to keep the cold where it belongs, and so save energy. We’re aiming for a reduction in energy consumption by being more efficient. We will achieve this by using freezers with doors, LED lighting, heat exchangers and devices to control energy performance in stores. In the last three years, our companies have invested more than 240 million euros in these technologies, generating annual savings of more than 100 million euros and 560,000 tonnes of greenhouse gases. Nothing can be done without involving employees; our in-house Let’s Go Green project was launched in Portugal in 2015 and has reached all the companies, raising awareness of best practices in the use of energy, water and paper, and promoting recycling.

DRIVING A SMART LOGISTICS

Every day, thousands of food products are transported from our distribution centres to our stores. “How can we do this efficiently?” is a question we’re always asking when it comes to logistics. Conventional wisdom has it that, if you’re going somewhere, you should make the most of your journey. And that’s what our backhauling and fronthauling programmes are about.

Backhauling refers to our vehicles that drive from the distribution centres to supply our stores. On their way back to the distribution centres, they take the opportunity to collect goods from suppliers along the way.

Fronthauling refers to our suppliers’ vehicles and involves making use of their return journeys, after delivering to our distribution centres, to drop off goods at stores.

Between 2011 and 2022, our backhauling programme avoided journeys totalling 134 million km, which would have emitted 122,000 tonnes of carbon dioxide equivalent; in 2022, the fronthauling programme avoided close to 153,000 km and emissions of 135 tonnes of carbon dioxide equivalent.

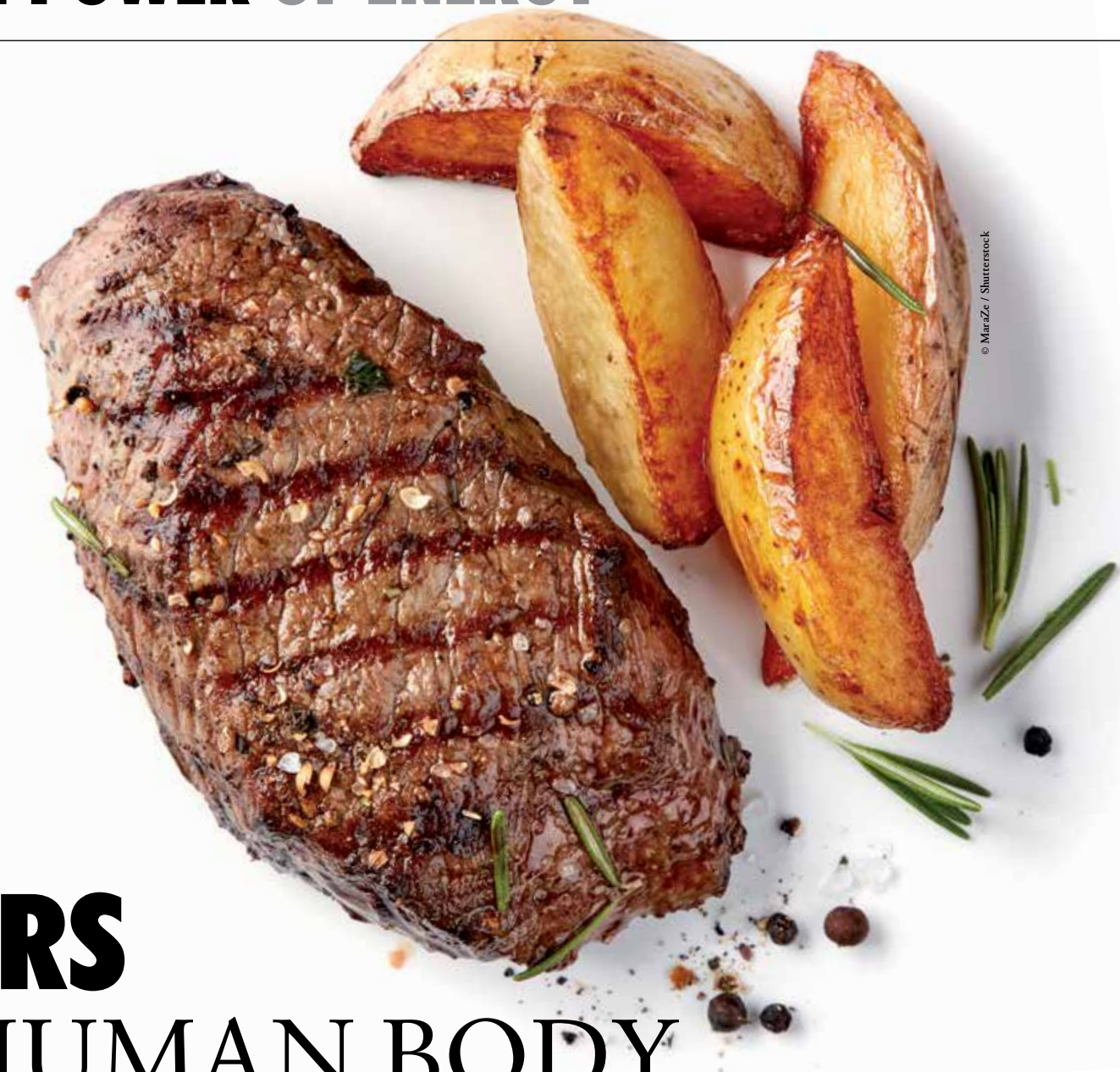
In other projects, Biedronka and Pingo Doce are joining the Lean & Green initiative to speed up the climate transition in logistics and investment in computerisation has improved stock management, as well as route planning and monitoring. In Colombia, transport of non-palletised products resulted in a reduction of 947,000 km in 2022 (1,548 tonnes of carbon dioxide equivalent) and the use of trailers saved 3 million km and emissions of 2,360 tonnes of carbon dioxide equivalent.



FUEL FOR LIFE

Every living thing constantly seeks energy to fuel its existence. At the heart of this life-sustaining power is food. But how is the energy contained in food unleashed to propel the human body's continuous operation? The answer is electrifying.





HOW FOOD POWERS THE HUMAN BODY

FOOD is joy, a source of pleasure and an expression of creativity. It is also a symbol of cultural identity and heritage and a way of bringing people together. However, at its core, food serves a more fundamental purpose: providing sustenance and nourishment. Food contains nutrients, which are essential for the growth, repair and maintenance of body tissue and for regulating vital processes. Nutrients are categorised into six major groups: proteins, fats, carbohydrates, vitamins, minerals and water. Together, they offer the body the energy it requires to function, measured in calories. Most of them are spent just keeping the human machine running. Humans obtain energy directly from three classes of fuel molecules: carbohydrates, lipids and proteins. The digestion of these nutrients in the alimentary tract and the subsequent absorption of their breakdown products enable cells to transform the potential chemical energy of food into useful work. Their major end products include glucose (from carbohydrates), fatty acids (from lipids) and amino acids (from proteins). Among these, glucose stands as the body's primary source of energy. It is either used immediately or stored as glycogen in the liver and muscles for later use.

CARBOHYDRATES

Source of energy, glucose is the main respiratory substrate.

STARCH: potatoes, rice and wheat products, bread, cereals and pasta.
SUGARS: fruit, smoothies, fizzy drinks, chocolate and sweets.

PROTEINS

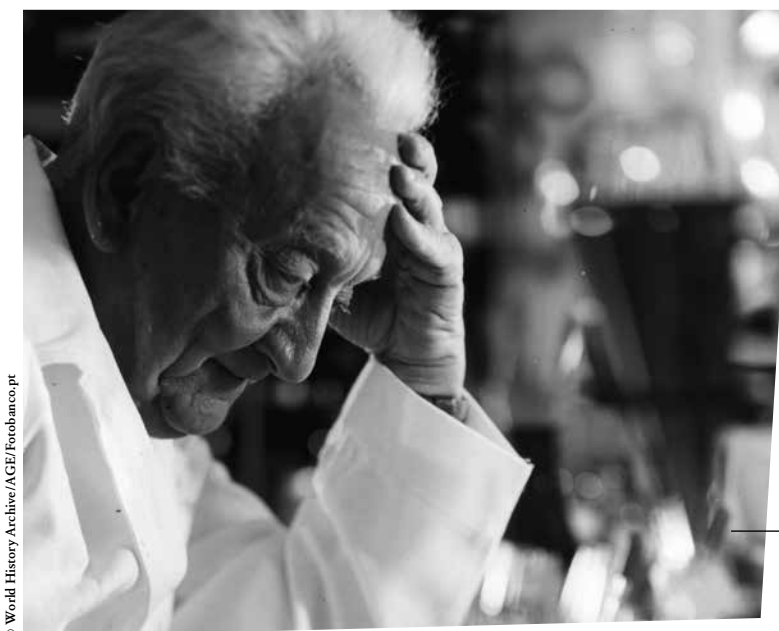
Growth and repair.

Meat, eggs, cheese, beans, nuts and seeds.

LIPIDS

Energy, make up part of cell membranes so essential for normal growth.

Butter and margarine, meat and processed meat, plant oils, oily fish, nuts and seeds.



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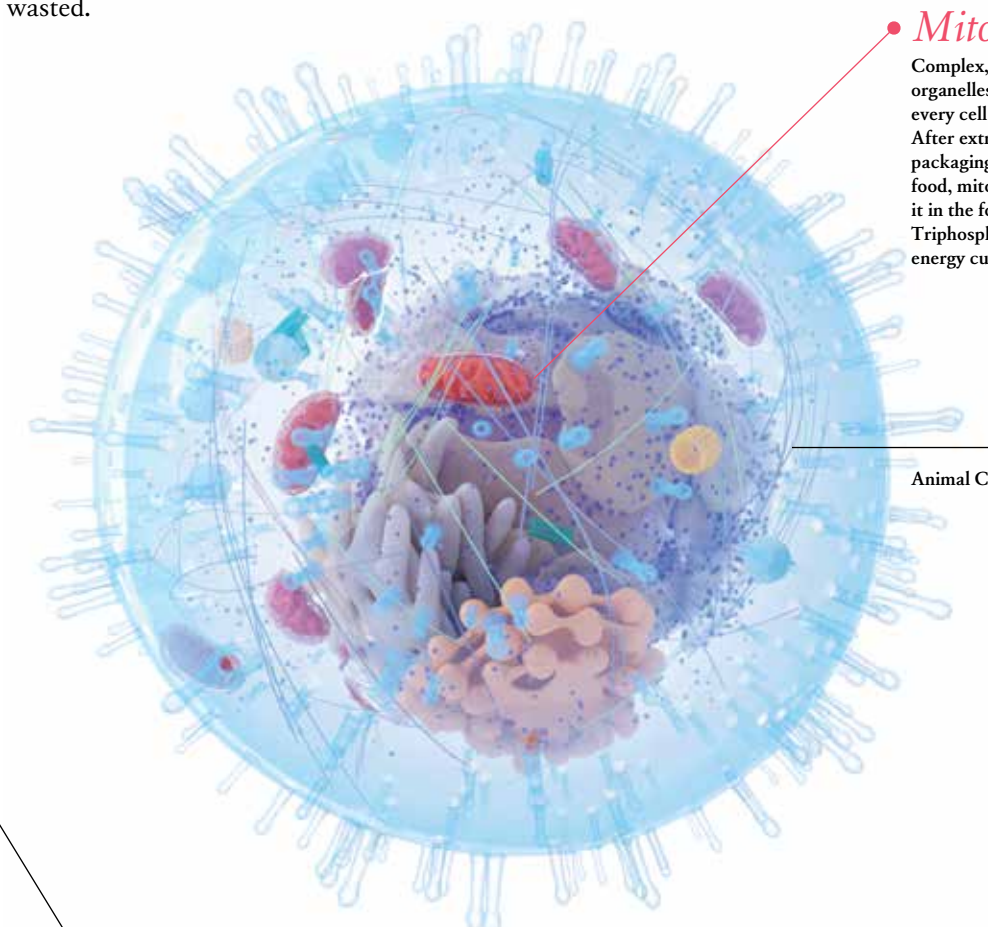
“Life is nothing but an electron looking for a place to rest.”

Albert Szent-Györgyi (1893-1986), Nobel Prize in Physiology or Medicine in 1937.

SLOW BURN

If a potato is set on fire, the energy it releases can cause a glass of water to boil. Just as the energy from the burning potato boils the water, when someone eats a potato, it goes on to fuel the body. The process will not involve flames and heat, but rather a gradual breakdown of the potato into basic nutrient molecules. These will provide the body with the energy needed to perform various activities, from solving math problems and running to lifting weights, and even relaxing on the sofa. This transformation of the potato into energy is achieved through a biological process known as cellular respiration, which is nothing more than slow combustion, similar to that of a candle. But, while this reaction is fast and out of control in fire, metabolism is more scrupulous: cells extract energy from their fuel with remarkable precision, directing it in a highly controlled manner toward the body's specific needs. And almost nothing is wasted.

Albert Szent-Györgyi (1893-1986), Nobel Prize in Physiology or Medicine in 1937, is often credited with saying that “life is nothing but an electron looking for a place to rest”. In this electron dance, the human body resembles an intricate assembly line in the power plant of cellular respiration. Glucose serves as the raw material, while the mitochondria are often called the powerhouse. Mitochondria are complex, bean-shaped organelles found in almost every cell of the body. After extracting and packaging energy from food, mitochondria release it in the form of Adenosine Triphosphate (ATP), the energy currency of the cell.



Mitochondria

Complex, bean-shaped organelles found in almost every cell of the body. After extracting and packaging energy from food, mitochondria release it in the form of Adenosine Triphosphate (ATP), the energy currency of the cell.

Animal Cell

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BREAKING IT DOWN

Cellular respiration is the process by which food, in the form of glucose, is transformed into energy inside cells. Cellular respiration can be aerobic, which uses glucose and oxygen, or anaerobic, which uses only glucose.

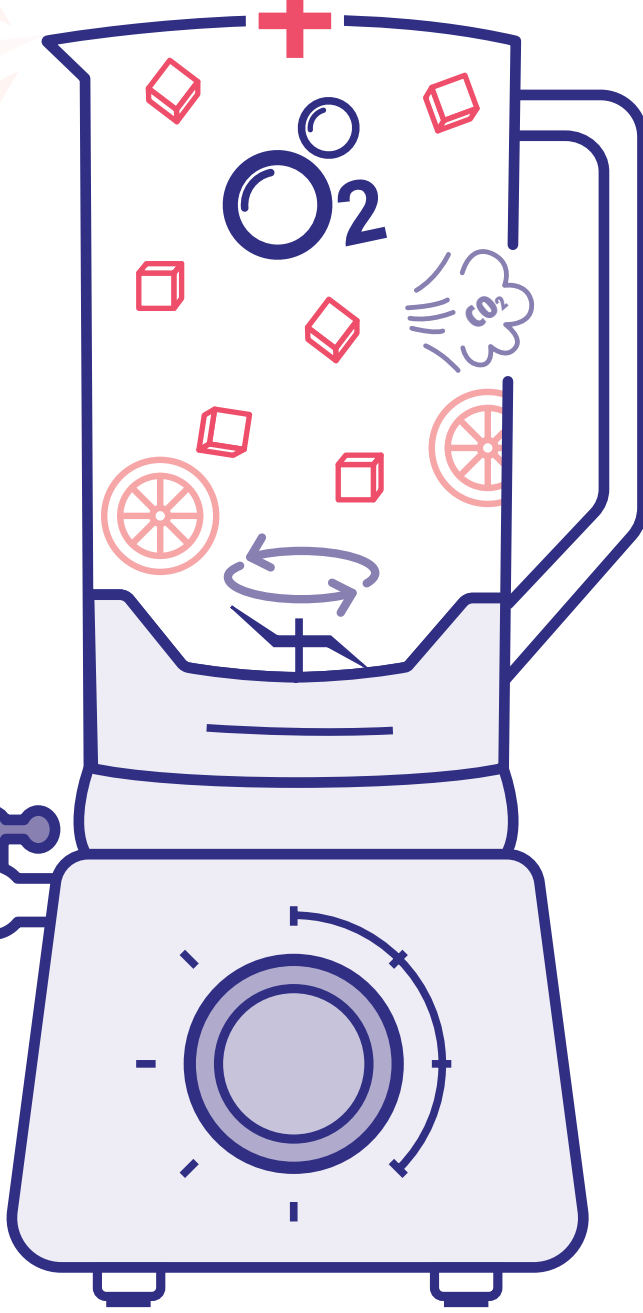
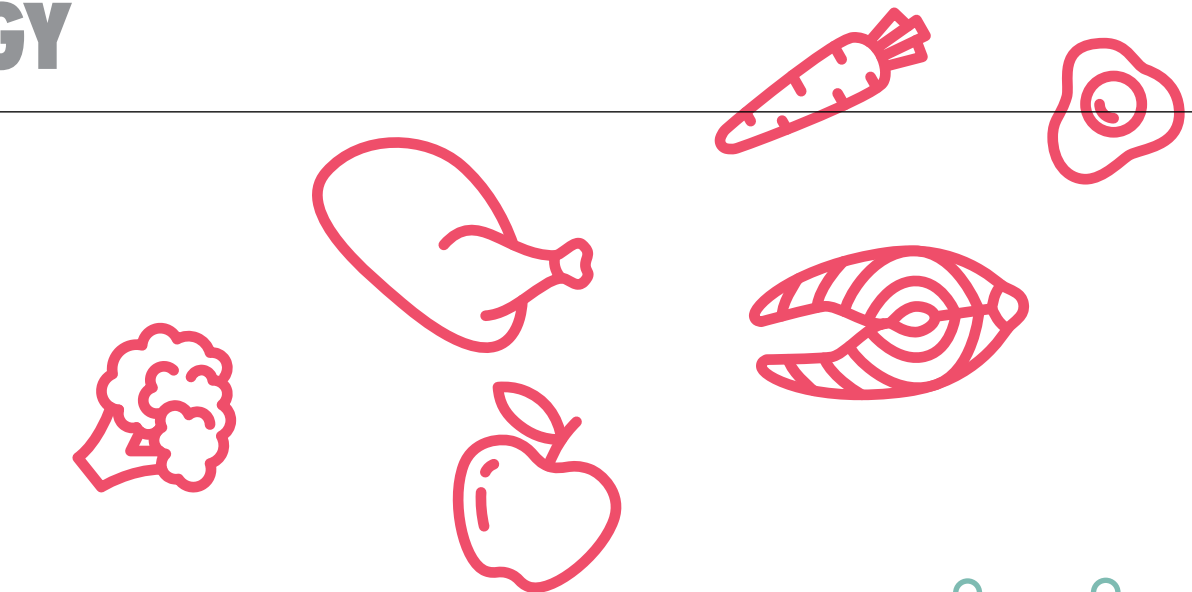
I AEROBIC RESPIRATION

Glucose molecules are broken down to create Adenosine Triphosphate (ATP) in the cytoplasm of the cell. The presence of oxygen allows the creation of massive amounts of ATP molecules. The process also creates water and carbon dioxide, which is a waste product.

In simple terms:

GLUCOSE + OXYGEN

CARBON DIOXIDE
+
WATER
+
OVER 30 ATP MOLECULES



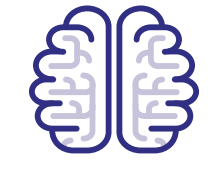
II ANAEROBIC RESPIRATION

In the absence of oxygen, ATP is created through other chemical processes, but in smaller amounts. The lactate is a waste product.

GLUCOSE
↓
LACTATE
+
2 ATP MOLECULES



Mitochondria are often called the "powerhouses" of the cell because they generate over 90% of the ATP produced in cells. They have their own DNA and may have evolved from independent microorganisms.



While the brain represents only about 2% of an individual's total body weight, on average, it accounts for about 20% of the body's total energy consumption.



Antoine Lavoisier (1743-1794), often referred to as the Father of Modern Chemistry, proved that respiration represents a gradual type of combustion, similar to that of a candle. By proposing that oxygen burned the carbon found in food, Lavoisier demonstrated that exhaled air contains carbon dioxide, a product of the interaction between oxygen and organic molecules within the body.






When cells, particularly muscle cells, are deprived of an adequate supply of oxygen, fermentation occurs, leading to a burning sensation and fatigue during strenuous exercise. Other organisms, such as yeast and bacteria, use various forms of fermentation as an essential part of many industrial and food production processes: for example, yeast causes alcoholic fermentation in bread-making and beer production.



Max Rubner (1854-1932), a physiologist based in Berlin, measured the heat value of nutrients and calculated the energy content that specific quantities of nutrients produced once metabolised. Rubner demonstrated that, for a resting animal, the heat produced was equal to the heat eliminated, thus confirming that the law of conservation of energy was applicable to living organisms as well.

HOW MANY CALORIES ARE IN EACH MACRONUTRIENT?

CARBOHYDRATES		4 calories /gram
PROTEINS		4 calories /gram
LIPIDS		9 calories /gram

© AKG Images / Fotobancor.pt

NOURISH A NATION

The development of a nation is not solely judged by its size, infrastructures or financial power. Easy and safe access to energy, water and good food, are key indicators that prove a country's quality of life. With almost 30 years in business, Biedronka's story goes hand-in-hand with Polish consumer habits.



BETTER FOOD, BETTER LIFE

WHEN the first Biedronka was established in Poland, and this was at a time when Bill Clinton was President of the United States, Boris Yeltsin was President of Russia and Lech Wałęsa ruled Poland, no one expected that the largest retail chain in the country today would become a vehicle for real democratisation on the Vistula. No one expected that it would soon be instrumental in the disappearance of the civilisational distance between the cities and the rest of the country, still recovering, like a phoenix from the ashes, from half a century of communism and the long shadow of the Soviet Union. Poland's post-1989 freedom is the result of the first free elections on 4 June of that year, but the embracing of equality and good energy throughout the country has been due to Biedronka.

Political democracy was won in Poland by a democratic opposition harassed by the communists, by people who spent years in prison for their beliefs. In 1989, freedom was born in Poland, but galloping inflation and unemployment became the new diseases plaguing society. And because inflation was emptying wallets (much like as it is happening today), there was room for food stores to help deal with inflation as effectively as possible. Such were the needs at the time: allowing Poles to buy food products at low prices.

Biedronka initially focused its strategy on offering affordable prices on a wide selection of popular goods.



Biedronka has democratised access to quality food in Poland over the last 30 years.



Biedronka's image has completely shifted to positive, praised for organised stores, attractive displays and a diverse range of quality products.

The first Biedronka was established in 1995, but a year later there already were 500 stores operating under the banner. The discount format worked well in the Poland of the 1990s and not just because of the low prices. An equally important reason was the fact that the stores were built in more remote areas: in villages deprived of access to modern food products, in small towns where the Biedronka stores were, next to the church, school and police station, the centre of local community life, but also in larger cities where the market for all fast-moving consumer goods was larger – and people were eager for products like that. Everywhere, Biedronka stores helped to unleash an energetic will to live by first providing Poles with a wide selection of low prices on popular goods, and nowadays giving access to high quality food, still at affordable prices. This is how Biedronka has democratised access to quality food in Poland over the last 30 years. Poland ranks 21st in the Global Food Security Index (designed and constructed by Economist Impact, affiliated with *The Economist*), which looks at data from 113 countries. Since 2012, the country's food security has improved by seven points, moving from a "moderate" to a "good" classification. This is largely due to Biedronka. Poland achieved its highest score in the "Food Affordability" category. The authors of the report emphasise that the country has succeeded in making food affordable for everyone. Besides prices, largely shaped by Biedronka, the advantage of food in Poland is also its quality and safety. In this category, Poland ranks 15th overall and 9th out of the 27 European Union countries. However, there would be no such high rankings if it were not for Biedronka's consistent activity.

This consistency is not only the constant and successful striving to be the #1 retailer in Poland, which is a fact, but also the work done on its own over the past almost 30 years since the first Biedronka store opened its doors. In the late 1990s, Poles used to describe Biedronka as being "more of a warehouse than a store", having "goods stacked on pallets, dairy products on open shelves", giving the "general impression of clutter, lack of order", having "a very limited selection of products" and targeting "people with a less affluent wallet and not very high expectations". Back then, Poles were buying basic products such as bread, milk, butter, selected cold cuts and cheap and simple dairy products in Biedronka. Today, the general opinion has rotated 180 degrees. Biedronka is portrayed as having stores with a very good visual impression, "organised, aesthetically pleasing", with lockable refrigerators for dairy and cured meats, without pallets everywhere, where "fruit and vegetables are nicely displayed", offering "a large selection of world cuisine products from recognised producers". Thanks to the pioneering trail blazed by Biedronka, Poles now have access to sophisticated products like fish and seafood, cured meats, cheese, a wide selection of vegetables and exotic fruits, excellent coffees and great wines. Over the years, Biedronka has been a driving force in the development of the Polish economy – especially local farmers and producers, as well as national industry. In fact, 93% of the food products sold at the more than 3,500 stores is sourced locally. The positive impact on suppliers and along the value chain in Poland is beyond measure.

SOCIAL ENERGY

Solidarity is a basic human quality. But it is more than providing financial aid to the more needy; it is understanding, caring, supporting, doing what has to be done to release the positive energy that connects people.

The "Food for Shared Moments" programme aims to reduce loneliness among elderly people in rural areas of Poland. Rural housewives' clubs organise monthly meetings around a communal table inviting local seniors and use a special e-code from the Biedronka Foundation to pay for the food they need in Biedronka stores.



SHARING IS CARING



The Group donates surplus food that meets food safety standards but cannot be sold to social welfare organisations, which then ensure that it reaches people in situations of social and economic vulnerability. This practice is adopted by all Group companies and enables the products to fulfil their primary mission: to feed people. Nearly 22,000 tonnes of food were donated in 2022.

In order to be sustainable in the long term, a business like ours has to be closely connected to the societies that we operate in, contributing to the well-being of these communities. A responsible corporate citizen doesn't stop saying "here" when a purely commercial relationship comes to an end – the connection is there to stay and the bonds must be constantly reinforced. In the case of the Jerónimo Martins Group, this attitude in the world of business has its roots in the basis of its activities. There is respect for memory, the care that the disadvantaged deserve and a willingness to innovate, which find a balance when we speak of social responsibility.

Companies can and should help meet the needs of the weaker segments in society. Reputation and a good corporate image are valid reasons for this, but the satisfaction and pride with which our employees take part in social projects and the way these can generate a positive impact on society are simply a fair return for the benefits gained from an economic activity. And in the long run, helping to care for a society also means promoting its capacity for economic intervention. For Jerónimo Martins, disadvantaged children/young people and senior citizens are the two social groups that are the preferred target for support in this area. The campaigns run are essentially aimed at combatting malnutrition and hunger, trying to break cycles of poverty and social exclusion.

Making this positive social energy flow will only be possible if there is a deep sense of solidarity. In 2020, the commitment of the Jerónimo Martins Group in this area took on a new dimension, with the creation of the Biedronka Foundation. This came about through a desire to help the elderly, one of the most vulnerable groups in Polish society and, in 2022, it was able to have a positive impact on around 140,000 people – that's saying something, after just three years in operation.

According to Katarzyna Scheer, Chairwoman of the Biedronka Foundation, the foundation "spent 60 million zloty [13.5 million euros] on aid programmes in 2022 – twice as much as in 2021. Out of this amount, 25 million went to supporting victims of the war in Ukraine and 35 million to programmes aimed at senior citizens. The new needs associated with the war meant that we had to increase the scale of our activities by leaps and bounds. It resulted in us gaining unique experience and skills and, above all, building valuable relationships with new NGOs – these are the positive sides of the dramatic events that we have all witnessed."

The Foundation's largest programme is "For Everyday Shopping", which is conducted jointly with Caritas Polska, and reached 11,000 seniors. The second largest programme – based on prepaid cards (Good Card) and aimed at smaller local organisations – has grown from 600 cards and eight organisations to 5,000 cards for seniors and 38 organisations.

There is also an ambitious new programme, "Food for Shared Moments". Aimed at tackling loneliness among older people in rural areas, the pilot edition has reached more than 3,500 meetings between October 2022 and November 2023. These meetings are organised by the Rural Housewives' Clubs, which receive an electronic code from the Foundation to use in Biedronka stores and purchase the products needed to cook a meal for the meeting.

Humans have an instinct to care for others. The social connection that exists within us is one of the reasons for the survival of our species.



The "For Everyday Shopping" is one of the strategic programmes of the Biedronka Foundation. It is implemented in cooperation with Caritas Polska and is aimed at helping elderly people in need. Senior citizens receive a prepaid card which is topped up with a fixed amount every month for ten months (185 zloty in 2022) and can be used in Biedronka stores.

EMPOWERING COMMUNITIES

BIEDRONKA 2022 SOCIAL HIGHLIGHTS

180
MILLION
EUROS
(800 million złoty)
- contribution to the public budget from corporate income tax.

140
charities that received aid from the Biedronka network.

1.7
MILLION
EUROS
the great orchestra of christmas charity
(7.4 million złoty) raised together with customers for the Grand Finale of the Great Orchestra of Christmas Charity (WOŚP), Poland's largest charity event.

44
MILLION
EUROS
(200 million złoty) worth in food that reached almost 3 million people in need.

13
MILLION
EUROS
(60 million złoty) allocated by the Biedronka Foundation to provide seniors with access to quality food and to create projects aimed to meet their social needs.

93%
of private brand and fresh food sourced from local suppliers.

87,000
tonnes of fruits and vegetables supplied by local farmers.

57,000
Dada Welcome Packs given to newborn babies of less affluent families living in Poland.

50,000
servings

of Christmas food were prepared for the homeless and needy, supporting the Jan Kosciuszko Christmas Eve.

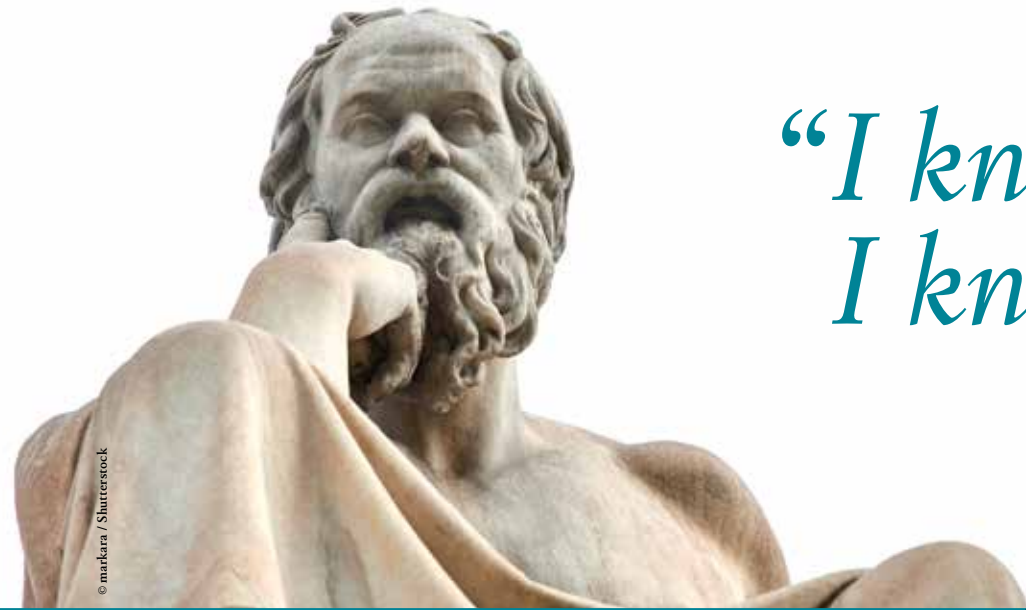
1.8
MILLION
menstrual hygiene supplies donated to the Periodic Coalition, an organisation that fights menstrual poverty in schools, orphanages and among homeless people.

KNOWLEDGE IS POWER

The pursuit of the fundamental nature of human knowledge is an enduring journey in Western philosophy, whose roots date back to Ancient Greece. This intricate quest inspires a thorough exploration of the origins and boundaries of knowledge, as well as its impact on the evolution of societies.

AS FAR AS WE KNOW

“I know that I know nothing”



Statue of ancient Greek philosopher Socrates in Athens.

SOCRATES
(c. 470–399 BCE)

PLATO
(c. 427–347 BCE)

“I know that I know nothing”: while the exact wording of this paradoxical statement might vary due to its oral transmission over time, its essence remains consistent with the sentiment that encapsulates Socrates’ philosophy: wisdom lies in understanding the vastness of one’s ignorance. As far as we know, Socrates (c. 470–399 BC) never left behind any written records of his teachings, relying on his contemporaries, particularly his student Plato (c. 427–347 BC), to transmit his era-defining thinking. There are several versions of the origin of the quote. The most well-known recounts that a friend of Socrates, Chaerephon, went to the sacred sanctuary of Delphi to ask the god Apollo if there was anyone wiser than Socrates, to which Apollo responded negatively. So, Socrates set out on a quest to find someone wiser, having turned to people such as statesmen, poets and teachers, using what is now known as the Socratic method: a technique of cooperative dialogue that employs incisive questioning to stimulate critical thinking and draw out presuppositions. As reported in Plato’s *Apology* (399 BC), at the end of his investigation, Socrates concluded: “I am wiser than this human being. For probably neither of us knows anything noble and good, but he supposes he knows something when he does not know, while I, just as I do not know, do not even suppose that I do.”



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ACCESSING REALITY

“What does it mean to know something? Can we know something for sure?”



© Mophart Creation / Shutterstock

RENÉ DESCARTES
(1596–1650)

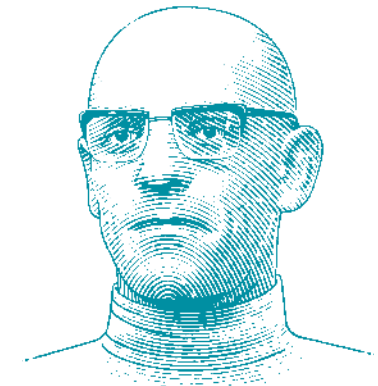
From the founder of Western philosophy’s “knowing nothing” highlighting intellectual humility, epistemology — the branch of philosophy concerned with the theory of knowledge — has endlessly raised questions around our access to it. According to Plato, knowledge is justified true belief: that is to say, one can only assert that a belief is knowledge if it can be justified and turns out to be true. In the *Allegory of the Cave*, he illustrates the journey from ignorance to true knowledge. Prisoners in the cave represent those with false beliefs (shadows), while the freed prisoner ascending to the outside world symbolises the philosopher gaining true knowledge through reason and dialectical inquiry. He has ascended to the world of Forms: abstract, non-material and eternal entities that exist independently of the physical world. Plato laid the groundwork for Rationalism, which would emerge in the 17th and 18th centuries. René Descartes (1596–1650), often called the father of Modern Philosophy, is one of its key figures. His foundational “I think, therefore I am” (*Cogito, ergo sum* in Latin) statement marks his quest for certain knowledge through reason. Descartes starts by doubting everything, including the existence of the external world or God. However, he realises that, since the act of doubt presupposes a thinking subject, while everything else might be uncertain, his own existence as a thinking being is undeniable.

FRANCIS BACON
(1561–1626)

JEREMY BENTHAM
(1748–1832)

MICHEL FOUCAULT
(1926–1984)

WHAT IS KNOWLEDGE FOR?



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Another question lies beneath the never-ending quest for the nature and possibility of knowledge: what is the point of knowing? English philosopher Francis Bacon (1561–1626) reflected on the transformative potential of knowledge. Bacon’s views are encapsulated in his memorable phrase “for knowledge itself is power” (from Latin *Nam et ipsa scientia potestas est*), found in *Mediationes Sacrae* (1597). One of the most influential minds of the 20th century in regard to discussing the connection between knowledge and power was French thinker Michel Foucault (1926–1984), best known for his interest in understanding social structures. Foucault coined the term “power/knowledge” (*pouvoir/savoir*) to emphasise

the intimate connection between them. He argued that power is “capillary”, diffused throughout society and constantly being exercised in different ways by everyone. It hinges on “regimes of truth”: what we collectively perceive as true shapes the power relations and dynamics. This makes power productive: it moulds what we know, which in turn affects how we behave and interact. For Foucault, there was a fundamental shift in the way power had been exercised in recent decades in the West: from sovereign power, focused on the authority of monarchs and the State, to a new age defined by “biopower”. Biopower is concerned with the regulation and management of populations as a whole, seeking to control and shape their behaviour, health, and well-being.

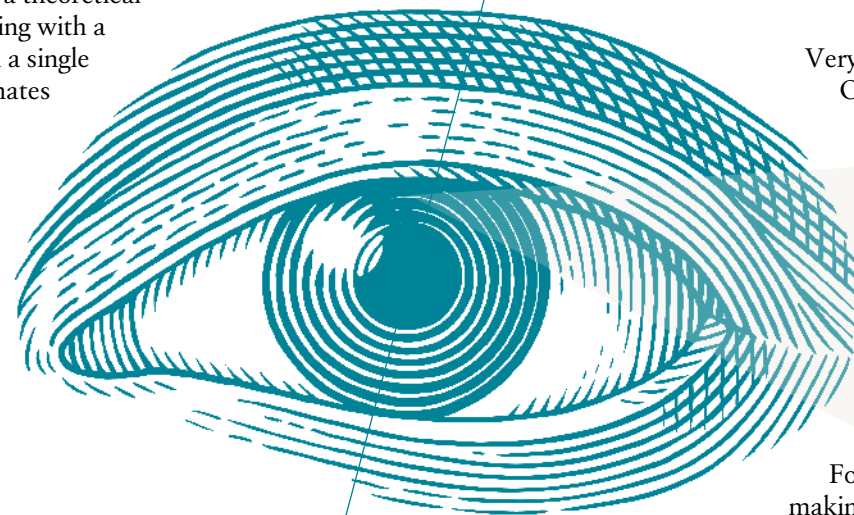
POWER/KNOWLEDGE IN THE DIGITAL ERA

Michel Foucault died before the emergence of the Internet but his work remains timely. What would he say of this virtual new reality? Perhaps he would see social media as a technical elaboration of biopower (and counter-biopower). On one side, amazed by the opportunity they bring to give a voice to the oppressed and even to stir up revolution, and excited by the idea of using these platforms to erode conventional power structures in order to transform lives for the better. But he would also alert to how they can trap people in a system of constant surveillance, where they give away so much of their personal data, used to control and influence them on many levels: what they see, what they buy, how they vote. What they believe they know. We would recall the Panopticon metaphor. Proposed by the English philosopher Jeremy Bentham (1748-1832), the Panopticon is a theoretical design of a circular prison building with a central watchtower from which a single observer can observe all the inmates without them knowing if they are being watched at any given moment. Its key feature is the asymmetry of information and power: even if they cannot see the observer, inmates are aware that they might be under surveillance. This instils self-discipline and internalised control, as they regulate their behaviour to conform to the norms.



GEORGE ORWELL
(1903-1950)

“Big Brother is watching you”



The Panopticon
**ASYMMETRY OF
INFORMATION AND POWER**

Very much like in George Orwell’s dystopian *1984*, the novel where “Big Brother is watching you”. Because the citizens of Oceania, the fictional totalitarian state in the book, are never sure if they are being watched by telescreens at any time, most tend to behave obediently day and night. Foucault said: “My job is making windows where there were once walls.” The problem today is that sometimes the windows are fake. By believing in fake news, power moves from the public to those who spread it. But false and distorted news was around long before the invention of the printing press. Around 2000 years ago, during the Roman civil war between Octavian and Mark Anthony, Octavian used “fake news” tactics to gain public support, accusing Anthony of moral decay, infidelity and drunkenness. He disseminated his message through poetry and slogans on coins. Ultimately, his propaganda succeeded, making him the first Emperor of Rome.

CITIZEN KANE KNEW IT ALL



ORSON WELLES
as Charles Foster Kane
in *Citizen Kane*, 1941.

CONSIDERED by many to be the greatest film ever made, *Citizen Kane* remains highly relevant more than 80 years after its release. Directed and co-written by and starring Orson Welles, the film explores the power of media manipulation and truth distortion. The plot centres on the rise and fall of publishing magnate Charles Foster Kane, whose character was based on the American magnate and newspaper publisher William Randolph Hearst. Kane, the owner of the *New York Inquirer*, controls the newspaper’s editorial decisions. “You provide the prose poems; I’ll provide the war”, says Kane in response to a writer who expresses his discomfort in lying about a war in Cuba. This scene mirrors contemporary concerns about how media organisations can shape narratives and spread fake news. Another important scene portrays the practice of yellow journalism, a term used to describe the sensationalising of news stories to attract readers. “If the headline is big enough, it makes the news big enough,” says Kane, who prioritises “the gossip of housewives” over substantial news. Despite giving journalists more and easier access to sources, social media platforms are also a hotbed for clickbait and conspiracy theories.

The digital age has empowered independent voices, such as bloggers and content creators, giving them visibility and influence. While this has enriched the news ecosystem, it has also raised concerns about the credibility and quality of information originating from non-traditional sources. And gatekeeping, which entails curating and sifting through news items for publication, has become complex due to over-information. Automation and algorithms now play a pivotal role in selecting content, potentially introducing biases into the news stories and content presented and crafting tailor-made narratives for everyone. Ultimately, if one person keeps reading the same point of view and similar opinions on social media, that person will tend to believe the “truth” someone is spreading.

It is up to each one of us to fully understand that all we know is that we do not know anything.

The POWER of FAITH

“Good things come to those who wait” is a popular expression that perhaps applies to those who believe as well. In 2023, one year later than expected, Lisbon hosted World Youth Day for the first time, welcoming Pope Francis and over one million pilgrims for the biggest Catholic event in the world. What is this power that moves and brings so many people together?

BELIEF AS THE ANCHOR *of* LIFE



Pope Francis arriving at Parque Tejo, Lisbon.

In early August, beneath a cloudless sky, thousands were gathering at Parque Tejo in Lisbon for Pope Francis' long-awaited speech, which would be given later that evening. The range of emotions everyone was experiencing is difficult to express in words, but they all had the same root. For Domenica, a Brazilian pilgrim, "faith is like a skeleton, it's sustenance". Domenica was with Francineide, another young Brazilian woman. They both shared a complicity that seemed like that of long-time friends, but in fact their paths had first crossed just a few days earlier, after they arrived in the city. By coincidence or design, something connected them from the first moment and, probably, forever. This powerful, invisible bond was felt by thousands of pilgrims travelling to Portugal from all over the world for 2023 World Youth Day, hosted for the first time in Lisbon. Although it is a Catholic event, its essence goes beyond religion. It's about faith as a source of power, love and purpose.

An estimated 80% of the world's population follows a religion, the main one being Christianity, but believing in the existence of divine beings precedes it. In ancient Greece, for instance, there were twelve gods and goddesses to worship. Part of humankind's cultural identity, faith in religious terms can be a polarising subject, but believing is something most of us share. Why is that? "Everyone is looking for meaning and direction, so we all believe in something." This was the answer given by José, from Porto, Portugal. Whether it's in the news, in love at first sight or in unlucky number thirteen, everyone relies on something. Not so much a rational choice, it's a survival tool, a necessity rooted within us for support and reassurance – a need for an anchor in life. And, in a world where uncertainty is the paradigm, "faith is something you can always rely on", according to Chantelle from Australia.

Believing that there's a purpose behind everything that happens makes misfortunes more acceptable and gives hope for light. "It's about knowing how to suffer and how to rise victoriously", in the words of María from Colombia. Relying on something greater is also reassurance that we are not alone, that we are being taken care of. If love has many translations, maybe faith is just one of them. At least, it's just like that for Joana, another Portuguese pilgrim: "There are things that happen that I cannot explain, and then I think it can only be love." Faith brings so many people together because it is an answer in the search for significance. At the same time, believing is a driver for change, for having a horizon in mind is the first step towards creating it. "The importance of belief is being able to focus on a better future; if you don't believe, you won't do anything to change today"; this was how Francineide put it. No matter how times change, some things in life are constant. Believing, in any way, is one of them. There's no right answer – it needs to be felt in order to be known. However, the point of view of pilgrims lit the way to a common ground: faith is a source of power available to all.

"Everyone is looking for meaning and direction, so we all believe in something."



José Luís Carvalho
PORTUGAL



More than a million people travelled from all over the world to celebrate faith together in Lisbon.



© Sebastião Basso / flickr

Saturday night gives way to Sunday morning for the Missioning Mass, the last event of 2023 World Youth Day.

A MEANINGFUL FAREWELL

The sunset was already painting the sky in shades of orange when Pope Francis took his place on stage for the vigil, making this divine-like scene complete. One and a half million voices repeated the same words in unison: “this is the Pope’s youth”. Focusing on faith as a trigger for action, the Pope empowered young people to follow their dreams, take chances on love and be authentic. He reassured pilgrims, volunteers and anyone who needed to hear it that they can change the world and should not be afraid. For those searching for meaning in life, these are not empty words – they are prophecies.

After the high point on Saturday night – one could call it a true Saturday Night Fever – Sunday dawned peacefully. When Pope Francis closed the Missioning Mass, it was time to go home. More than one million people, together in the same place for a week, would soon be spread across the world again. Hours before, when asked about what made them travel so far, Domenica and Francineide took their recent friendship as an example: “The power of World Youth Day is to demonstrate faith to the world. It’s intended to show that true love exists and unites us. We want others to experience that love too.” By the end of the Pope’s speech, they were probably smiling.

“Faith is like a skeleton, it is sustenance.”



© Mamed Lino / EditSetGo

Domenica Berlarmino
BRAZIL

Joy and positive energy were all around in the city.



© Mamed Lino / EditSetGo

Faith brings so many people together because it’s an answer in the search for significance.



Check out the video with these interviews on the newest Feed website.

PINGO DOCE FEEDING 2023 WORLD YOUTH DAY

World Youth Day was the biggest event Portugal has ever hosted, involving 25,000 volunteers and several months of preparation. Attended by one and a half million people and with more than 300,000 registered pilgrims from 50 countries, Lisbon was the epicentre of faith and joy.

Those were glory days. Waving the flags of their countries with pride, singing out loud in the streets and smiling each step of the way, the pilgrims' energy was so compelling it was almost palpable. From the small local events taking place all over the country to the main events hosted in the capital city, excitement was all around.

Although faith can be sustenance, every pilgrimage needs another source of energy – a more tangible one. Pingo Doce was the event's official food partner, which means it was serving its fresh

food at the main venues and helping prepare the pilgrim kits and more general meal kits. At the stores, stocks were replenished and opening hours extended. Sustainability played a key role, with the ECO filtered water bottle being part of the pilgrim kits, allowing them to refill the reusable bottles for free.

Throughout the week, the Pingo Doce tents occupied four strategic locations in the city of Lisbon - Belém, Terreiro do Paço, Avenida da Liberdade and Parque Tejo - where, from morning until late night, and with the help of more than 300 volunteer employees, around 190,000 pilgrim kits were distributed and over 22,000 meals were sold. At the Vigil, the last and most awaited event of World Youth Day, taking place between Saturday and Sunday in Parque Tejo, a huge operation with 89 galleys was set up to distribute 400,000 meal kits.

One of Pingo Doce's main venues, at Terreiro do Paço, Lisbon.



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© All rights reserved

Nearly
32,500kg
of food cooked by Pingo Doce's meal solutions unit in the six days of the event.

400,000
meal kits donated to the pilgrims at the Vigil.



© All rights reserved

The **ECO REFILLABLE**
water bottle was part of the pilgrim kits handed to 350,000 people.



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OVER 22,000
MENUS SOLD
in the event's main venues.

More than
300 employees
provided support and volunteered to help in the operation.

GIANT

Whisperers

Within the depths of forests lies a realm of mysteries. Among them are mycorrhizal fungi, quiet architects of a vast underground network. Beyond, much like this unseen web, the silent immersion of forest bathing weaves another tapestry.

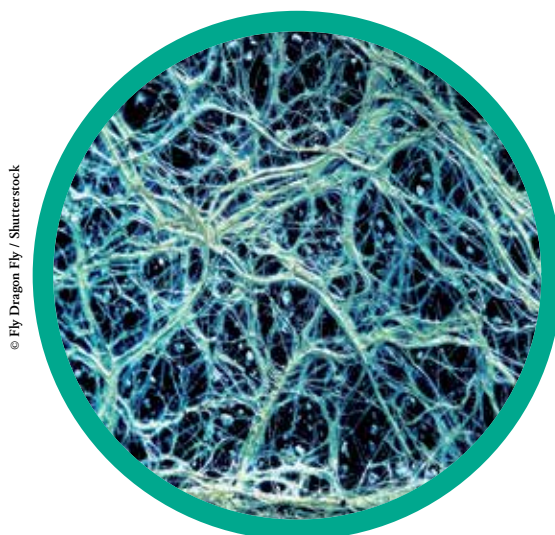
THE HIDDEN LANGUAGE OF TREES

RIDING on the wings of time, trees have risen as silent witnesses, towering sentinels and guardians of the mysteries of the natural world, each branch and root a portal to the unknown. Protagonists of timeless myths and legends, they weave a mantle of enchantment within fictional tales. In the lands of Oz, a wise tree counsels intrepid travellers, while in Tolkien's Middle-earth, they hold the power to shape destinies. While the idea that trees literally talk remains fantastical, the possibility of another form of communication has been unravelled by science, revealing a different kind of story: that of a complex underground partnership between trees and threadlike fungi called mycorrhizae. This vast network enables trees to exchange nutrients, water and even information.

Discovered in the mid-1990s, this revelation led to a surge of research on what the academic journal *Nature* called "the Wood Wide Web." Pioneered by Canadian ecologist Suzanne Simard during her tenure with the British Columbia Ministry of Forests, it revolutionised our understanding of forest ecosystems.

Using radioactive carbon, Simard and her colleagues demonstrated nutrient circulation between trees of different ages. The experiment was designed so that, at a certain point, the younger trees stopped receiving sunlight. In the process, the absorption of radioactive carbon skyrocketed, suggesting that the underground flow of nutrients could be helping younger plants to grow in unfavourable conditions. Through this fungal highway, trees transmit chemical signals, warning neighbouring trees of potential threats like insect attacks or disease, fostering community-wide defence.

Numerous media sources, articles, books (including a Pulitzer Prize winner), movies and TV shows have helped popularise the concept, celebrating forests as models of cooperation, in contrast to the conventional Darwinian view of species rivalry.



Vascular plant fine roots looking like a neural network.

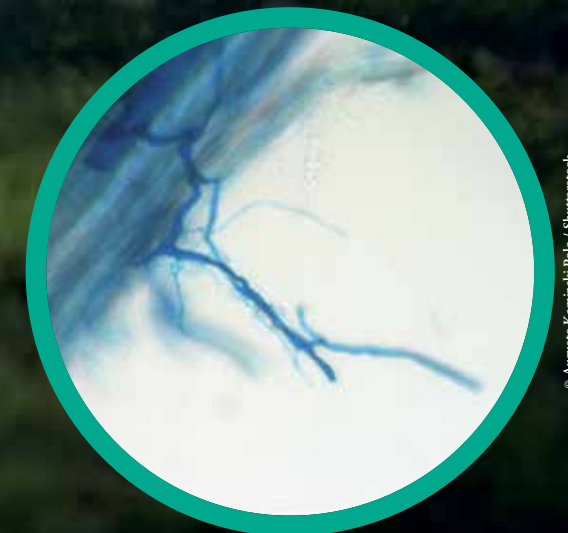
© Fly Dragon Fly / Shutterstock

WOOD WIDE FIGHT

The implications of the Wood Wide Web extend far beyond science, bearing profound ecological and conservation implications. Recognising the importance of preserving and nurturing the mycorrhizal networks could safeguard the health and resilience of entire ecosystems.

Mycorrhizal fungi have now gained attention in the search for nature-based solutions to climate change. A new study by an international team of scientists, including researchers from the University of Sheffield's School of Biosciences, shows that about 13.12 gigatons of carbon dioxide moves from plants to fungi annually, transforming the soil into a massive carbon pool. The amount of carbon stored equals roughly 36% of yearly global fossil fuel emissions (more than China's annual output). Therefore, researchers advocate including fungi in biodiversity and conservation policies. At the current rate, the UN warns that 90% of soils could be degraded by 2050, which could be catastrophic for efforts to curb climate change and rising temperatures, and for the productivity of crops and plants as well.

Mycorrhizal fungi have now gained attention in the search for nature-based solutions to climate change.



Microscopic cut of root colonized by mycorrhizal fungi.

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© Fran_Ke / Shutterstock



© Teo Tarna / Shutterstock

Understanding dynamics like carbon storage is essential for addressing climate change.

BATTLES AMONG TREES

Tropical forests host hundreds of species of trees within a square mile. Understanding how these species coexist is a struggle for scientists. In a study published in *Science* magazine, researchers from the University of Texas at Austin have provided new insights into the answer. Combining computational modelling with 30 years of data, the researchers discovered that adult trees in a Panamanian forest are three times as distant from other adults of the same species. They also found that each species is much more affected by its own kind than by others, probably due to species-specific enemies. These enemies “make room” for other species to establish around every tree, preventing dominance and leading to a more diverse forest. So, the further away, the better. This is clearly a stepping stone to understanding dynamics like carbon storage, essential for addressing climate change.

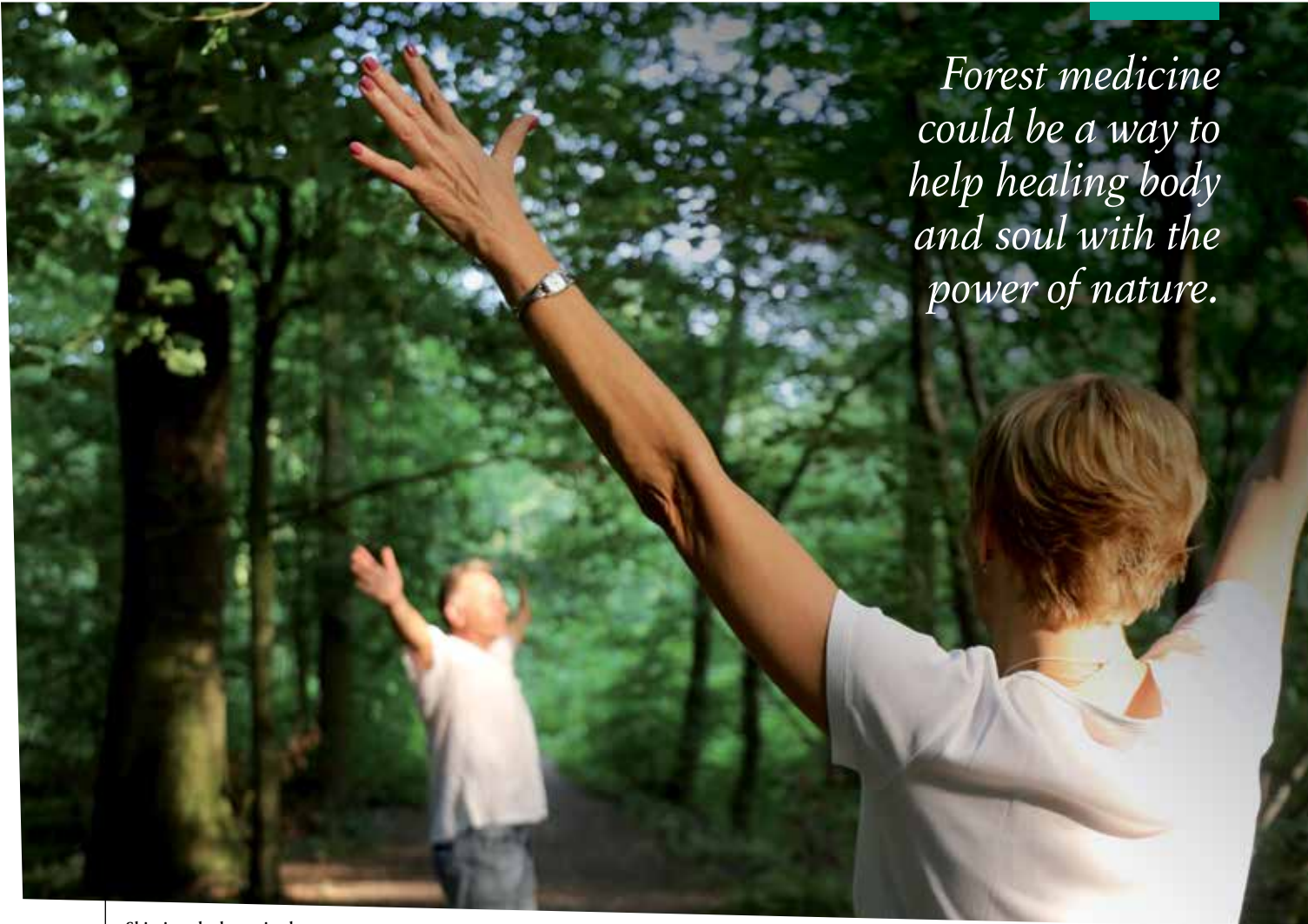
FOREST PUMP

Pause. Stop the time and stop everything. No. This is the time. This is everything. This is us, simply enjoying the now. Now is a quiet symphony of which every rustling leaf, every glistening dewdrop is a note. And it comes in whispered secrets of impossible colours and scents. Immersed into nothingness, we just walk. Where to? The point is not reaching somewhere: it's just to keep going. Going anywhere. Wherever there are trees. It is in this tranquil haven that the phenomenon of forest bathing unfolds, a practice steeped in ancient wisdom yet resonating with modern science. This journey of shinrin-yoku unveils the delicate dance between trees and our well-being, a dance that has echoed through cultures and epochs. “Shinrin” in Japanese means

“forest,” and “yoku” means “bath.” So, it means bathing in the forest atmosphere, or taking in the forest through the senses. Humans have enjoyed forest environments for eons, essentially because of their peaceful atmosphere, beautiful scenery, mild climate, pleasant aromas and fresh, clean air. But Japanese researchers suspected there was more to it. In the early 1980s, they discovered that this exercise could help prevent lifestyle-related diseases. In 1982, they proposed the concept as an eco-antidote to tech-boom burnout because phytoncides, natural compounds released by trees (such as alpha-pinene and limonene) have been proved to lower levels of cortisol, the stress hormone, leading to a greater sense of calm and relaxation.



© Tania Esler / Shutterstock



Forest medicine could be a way to help healing body and soul with the power of nature.

Shinrin-yoku has gained recognition for its potential health benefits, including stress reduction and improved mood.

© U.J. Alexander / Shutterstock

Serial studies have been conducted to investigate the effects of forest environments on human health, resulting in a new medical science: Forest Medicine. It was established by one of the founders of this global movement: Qing Li, a medical doctor and professor at the Nippon Medical School in Tokyo, one of the most prestigious medical schools in Japan. Forest Medicine is being prescribed to reduce stress levels and blood pressure, strengthen immune and cardiovascular systems, boost energy and mood, and treat depression and sleep disorders.

NATURE'S PRESCRIPTIONS

A robust body of research shows that just spending time in nature is beneficial for people's physical and mental well-being. The World Health Organisation's recent report on "Green and Blue Spaces and Mental Health" supports this theory and highlights the opportunities for social interaction and places "to relax and leave daily stress behind for a while" that it provides. Numerous potential biological mechanisms underlie the advantages of being in green or blue natural environments. One hypothesis suggests that these benefits arise from attention restoration theory, which posits that immersing oneself in nature can alleviate mental fatigue and enhance the capacity to focus.

But within natural environments, the sense of calm is not derived solely from shades of blue and green; the shapes of objects also contribute to comfort. Research suggests that observing natural fractals – intricate designs repeating across different scales in nature – triggers heightened alpha wave activity in the brain, inducing a state of relaxed yet attentive awareness, as indicated by electroencephalograms. Another study published last year in Occupational & Environmental Medicine revealed that individuals who frequent green spaces five or more times weekly display notably reduced reliance on psychotropic, antihypertensive and asthma medications compared to those with limited exposure to nature.

OFF WE GO

As we traverse the verdant tapestries of Portugal, Poland and Colombia, we are not just seekers of respite; we are voyagers retracing the footsteps of our ancestors, of those who knew the secrets of the forest long before scientific studies confirmed them.

Nestled within the Sintra-Cascais Natural Park, 30 minutes away from Lisbon, unfolds the perfect blend of forested landscapes and coastal panoramas. The landscape is defined by the presence of granite-clad mountains, lush forests and the dramatic Atlantic Ocean shores that mark the westernmost edge of Europe. This distinctive fusion of geological formations and geographic attributes, coupled with the varied flora, engenders a microclimate that endows this location with its singular and exceptional essence.



Sintra-Cascais Natural Park, Portugal.

© LifeCollectionPhotography / Shutterstock



In the Caribbean region of Colombia, Tayrona Natural Park offers an exquisite fusion of exuberant forests and pristine coastal landscapes enveloped in a sense of peace and serenity. Located in the foothills of the Sierra Nevada, rising approximately 5,650 metres above sea level, this protected area offers an experience that is both invigorating and restorative. The park is of significant cultural importance due to its historical association with the indigenous Tayrona people. Ancient ruins, terraces and ceremonial sites scattered throughout the park attest to their presence and offer insights into their way of life.

Tayrona Natural Park, Colombia.

© Diego Graña / Shutterstock

Poland's Białowieża Forest, a designated UNESCO World Heritage Site, offers an entrancing portal into a realm that harks back to the primeval past. Situated on the watershed of the Baltic Sea and the Black Sea, this transboundary property is exceptional for the opportunities it offers for biodiversity conservation due to its size, protection status and substantially undisturbed nature. In the park, visitors can experience what a true primeval deciduous forest, which covered most of Europe hundreds of years ago, is like. The forest has the largest population of European bison living in the wild.



Białowieża Forest, Poland.

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BOUND to WIN

THE GRANDEUR OF MATO GROSSO

Chapada dos Guimarães,
Mato Grosso, Brazil, rock surrounded
by green and brown mountains
and vegetation.

When you need to go further, working with others is a winning strategy. In the state of Mato Grosso, Brazil's agricultural heartland, four organisations have banded together in a project to fight deforestation and conversion – the Jerónimo Martins Group is one of them.

HUNDREDS of kilometres, as far and farther than the eye can see, both to the north and south and to the east and west, always with the same climate, the same landscape and the same flora and fauna – this is what makes a biome, a natural area rich in biodiversity and essential for the balance of ecosystems. The Amazonian Forest, the Pantanal wetlands and the Cerrado are Brazil's three main biomes – and they all converge in Mato Grosso. All three are under threat, from clearing of forest areas and converting natural areas to make room for agricultural production. Stretching over more than 900,000 square kilometres (equivalent to France and Germany combined), Mato Grosso is the third largest state in Brazil, located in the west and centre of the country. In days gone by, it attracted explorers eager

for what the dense vegetation “promised” – gold and other minerals. Today, Mato Grosso offers wealth of another kind: its agricultural output and exports exceed those of any other Brazilian state, making it a global cattle farming powerhouse. Mato Grosso produces a large part of some of the commodities essential for everything to do with food, including the retail food sector. One example is soy, the agricultural commodity consumed in the largest quantities worldwide. In the 2022/2023 agricultural year alone, around 46 million tonnes were produced in Mato Grosso, representing almost 12% of total world output. The state also produces cotton, maize and other cereals, and is home to 34 million head of cattle, the largest concentration in Brazil. Production capacity has grown hand in hand with deforestation and the conversion of natural areas. The unique

natural features of this tropical region of South America have long made it attractive to farming, and agriculture has powered economic development. Starting in the late nineteenth century, the clearance of millions of hectares of forest gave way to farming and cattle ranching.

Although 53% of the area of Mato Grosso is still covered by native vegetation, controlling deforestation is a challenge. The contention over land use is directly fuelled by the growing demand for agricultural commodities on the global market. For example, between 1985 and 2022, the Cerrado (the world's most diverse savannah, covering 1/4 of Brazil's territory) lost 27% of its natural forest; over the same period, farming and cattle production land grew threefold.

These biomes have huge potential for economic development, but deforestation and conversion of natural areas here poses a global economic threat. This is because it releases carbon dioxide into the atmosphere, reduces the presence of biomass capable of capturing it and is responsible for the loss of biodiversity, with the consequent imbalance in ecosystems. Deforestation and the conversion of natural areas are also major causes of climate change.

MORE IS LESS: THE PCI STRATEGY

So, can output be increased and deforestation reduced at the same time? The Produce, Conserve and Include (PCI) strategy, launched in December 2015 during the Paris Climate Convention (COP 21) by Mato Grosso's state government, says it can.

The PCI strategy involves institutions from different sectors and seeks to promote economic and social development through sustainable land management. It went into implementation

in 2019 and, if its goals are achieved, it could generate a reduction in emissions and sequestration of some six gigatonnes of carbon dioxide. All this while still allowing economic output to grow in the farming sector. The question is how to increase output and reduce deforestation at the same time? The answer can be found by putting into practice Aristotle's theory that "the whole is greater than the sum of its parts" – in other words, by working together towards a common goal.

PROMOTING SUSTAINABLE LANDSCAPES IN MATO GROSSO

The PCI strategy has been developed at state level, but implementation needs a local approach, translating the wider gameplan into local action to be taken in strategic areas. Because it involves more than one commodity (soy and beef) of strategic interest to our business and because, in the case of soy, the location lies in an important source region, we decided to help fund one of these projects in Mato Grosso, in partnership with Amazon Environmental Research Institute (IPAM) and Nestlé. This project, launched in 2021, has made it possible to develop a local governance model in four municipalities (Campos de Júlio, Campo Novo de Parecis, Sapezal and Tangará da Serra) and an action plan for reducing deforestation. The first task was to identify 3.2 million hectares of native vegetation, where conversion to farming has been legally authorised. The next stage, where Sainsbury's joined forces with us, was to certify soy production using the standards of the Round Table on Responsible Soy (RTRS)



Soybean plantation in Cerrado, one of Brazil's main biomes and the world's most diverse savannah.

PCI 2030 TARGETS



(P)

PRODUCE

Generate low-carbon farming, increase the output of cattle and soya and increase the forested area (for example, by using low-yield pasture areas).



(C)

CONSERVE

Keep native vegetation cover in the state of Mato Grosso at 60%, reduce deforestation, implement the forest code and deploy financial incentives to conserve one million hectares of vegetation that can be legally deforested.



(I)

INCLUDE

Provide support for small farmers and protect the rights of indigenous peoples.

in an area of 15,000 hectares, to achieve compliance with the Brazilian Forest Code in a soy-growing area of 30,000 hectares, and to implement regenerative production practices in an area of 25 hectares. Producers will be paid for providing ecosystem services, such as carbon storage, biodiversity preservation and climate regulation.

In 2023, the project was extended to the municipalities of Diamantino and Alto Paraguai, which are extremely important for the source of the River Paraguai, the main river in the Pantanal wetlands, and for agricultural production and family farming. This region, the world's largest floodplain, is a natural World Heritage Site and a Biosphere Reserve.

According to Fernanda Xavier, a researcher at IPAM, "the success of the initiative will depend on a thorough investigation of the territory, giving local groups the lead in the actions with our support and encouragement. We need to see the territory as a whole and consider that all the actions that take place there have an impact in some way on all the variables and actors that coexist there. And, for this reason, they need to happen in a synergistic way. The challenge is enormous, as is the landscape that is the subject of this project, and this is a step towards the future we want: deforestation-free production and quality of life for the population."

Considering the geographical scale of the initiative, its ambitious targets and proposed time frames, the only way to successfully implement the project on the ground is by working together, through collective action. Support for this project came about as part of the Forest Positive Coalition of Action (FP CoA), a coalition we have belonged to since 2020 and which was born within The Consumer Goods Forum.

FIGHTING DEFORESTATION

@Jerónimo Martins

Fighting deforestation has been a consistent aim in our corporate responsibility strategy. The findings of the most recent evaluation conducted by CDP (Disclosure Insight Action) indicate that we're on the right track. In the specific case of the CDP Forests programme, which we have participated in since 2014, we have achieved a Leadership (A-) rating in all the commodities linked to a risk of deforestation: palm oil, soya, paper/wood and beef. We're the highest rated food retailer in the world. Under the CDP Water and CDP Climate programmes, we achieved a full A rating (the highest score).



CLIMATE WATER

ARA 10 YEARS OF SPREADING WINGS

In 2013, the Jerónimo Martins Group opened its first Ara stores, unleashing the power of colour and joy in the Colombian retail market. One decade later, Ara is one of the largest companies in the country and a driving force for social and economic development.

THE TAKE-OFF TO A NEW MARKET

WHEN

the Jerónimo Martins Group took the strategic decision to move into Colombia in 2011, traditional retail was still growing in sales year-on-year, faster than the modern retail sector and representing more than two thirds of the total market. The opportunity for a new format of proximity store was there, although it was also clear for the team under the direct leadership of Pedro Soares dos Santos, Chairman and CEO of Jerónimo Martins, that the Group's entry in Colombia would be no easy undertaking. This was also the first time the Group was designing, without partners, a new food store format and a business model from scratch, in a challenging market that until recently was practically unknown to Jerónimo Martins. "When we decided to invest in a country like Colombia, with a food store concept aimed at lower income segments of the population and starting up in the region with the highest unemployment rate, we were clearly choosing to get off the beaten track," explained Pedro Soares dos Santos in an interview to a Portuguese newspaper two years after the first stores opened.

Ten years after opening its first stores, the Group now has more than 1,200 and over 13,000 employees in Colombia.



Ara is present in more than 320 municipalities across Colombia.



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WHY COLOMBIA?

After an incursion (by acquisition), brief and unsuccessful, into Brazil in the 1990s, why the interest of Jerónimo Martins in returning to Latin America? First of all, because of its economic and political stability. Excluding the recent period of the pandemic and the subsequent worldwide inflation, Colombia has recorded only one year of negative growth since World War II, being therefore considered by the experts as a robust economy in that region of the globe. In fact, it is the 4th largest economy in the region, and, in more than 120 years, the country has had only four years of negative growth.

Colombia has also been a stable democracy in recent decades, and despite the deep instability caused by *guerrilla* warfare, the country firmly committed to a peace process – with an agreement signed in 2016.

At the same time, Colombia's receptiveness to foreign capital and its respect for the rule of law offered comfort and security for prospective long-term investment.

In the second most biodiverse country in the world, with more than 50% of the territory covered by forest and 75% of Colombians living in mountainous regions, there was (still is), however, a lot of groundwork to be done: the roads were still very bad and insufficient to cater for a logistics network that must be agile and efficient to fulfill the brand's promise of "Alegría al mejor precio" ("Joy at the best price"). "A trip that takes eight or nine hours by lorry can take only 20 minutes by plane," explained Pedro Soares dos Santos to Portuguese journalists at the Group's 2014 Annual Results conference.

Even for highly experienced teams in the retail area, things that appeared obvious often proved less so: "When we started up, there was no such thing as palletised products, something we take for granted in Portugal and Poland. We even had people delivering our crates jumbled up with mattresses! It was a huge challenge to modernise procedures, which in the short term meant higher costs for our partners. And it was all done by selling them a dream.

We would tell our suppliers: you have to change how you work. And they would ask us how many stores we had. All we could say in reply was 'we're going to have a lot, trust us!'. It was a question of faith, hard to convince," explained Pedro Veloso, the first General Manager of Ara, to senior managers of the Jerónimo Martins Group, nine months after operations started.



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PRIVATE BRANDS FIRST

In 2011, when the first "discovery teams" of Jerónimo Martins in Latin America were set up, work to develop Private Brands began straight away, in partnership with local suppliers.



Gachancipá's Distribution Centre, on the outskirts of Bogotá.

POWERFUL OPENING

On 13 March 2013, the same day the Argentinian Cardinal Jorge Bergoglio was chosen and presented to the world as the new Catholic Pope, Jerónimo Martins officially opened its first distribution centre and the first three Ara stores, located in Colombia's coffee-growing region, in a ceremony attended by the then President of the Republic of Colombia, Juan Manuel Santos. On the official opening day, shoppers flocked to the stores and the new macaw in town took off with clear skies on sight. Bringing new Private Brand products to Colombian consumers at affordable prices was key to tackle the market. Local independent operators were forced to change tactics quickly and responded by lowering their prices.

That month, Alexandre Soares dos Santos, the historical leader of Jerónimo Martins, wrote an open letter to the more than 28,000 employees in Portugal, expressing his trust in the future: "I returned from Colombia tremendously confident that we are following the right path to succeed not only in that country but also, later on, on the continent of Latin America." In the rest of its first year of activity, the Group settled its main operating format, opened 37 stores, and created more than 530 new jobs in the country. Ten years later, the Group employs more than 13,000 people in Colombia and operates more than 1,200 neighbourhood food stores.

Former Colombian President Juan Manuel Santos (left) cuts the ribbon of the first Ara store, in Pereira, together with Alexandre Soares dos Santos (right) and Pedro Soares dos Santos (centre).



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THE MOMENT TO GO REALLY LOCAL

In a decade of progress, not everything was *pan comido* (or "easy peasy"). Although the Group had teams working in the field for more than two years prior to the first openings, there are things that take time to reveal themselves completely. It was the case of eating habits, that vary from region to region, sometimes even from barrio to barrio. A single operational model for the entire country would be unlikely to succeed in Colombia. This was the moment to change the assortment from store to store. The store manager had to be, therefore, someone from the neighbourhood who was trusted by locals and given the autonomy to adjust prices in the face of fierce competition from street vendors and small grocers.

Feed's most loyal readers may remember *panela*, the rectangular or round compact bars of raw sugar cane, which are extremely popular in the coffee-growing region of Colombia but mean very little to consumers on the Caribbean coast, where Ara arrived in September 2015, and opened its 100th store.

In Cartagena de Indias, fruit and vegetables became Ara's top-selling products, outperforming the competition due to the quality of the banner's cold chain, in a hot and humid region where presenting fresh produce was still a very challenging task.

On the celebration of Ara's fifth anniversary, Nuno Aguiar, former CEO of the company, gave more colour on the Group's investment in Colombia, in a message to the Jerónimo Martins' employees: "With over 400 stores served by three distribution centres spread across 150 cities, it is safe to say that Ara is the neighbour Colombians can count on. It is through local partnerships that, together, we have been building an offer that translates into almost 600 Private Brand products, whose sales already account for more than 40% of the total."

THE FUTURE IS ON

The story has been one of growth and, ten years on from the opening of the first store, Ara is one of the 20 largest companies in the country and a driving force for economic development. In 2022, with Pedro Leandro as CEO of the company, Ara's sales reached the 1-billion-euros-milestone, and the Group opened its 1,000th store in Colombia, in the magical city of Cartagena. Today, Ara works with more than 500 Colombian suppliers with whom it develops long-term relationships, boosting growth and contributing to create local jobs. With the aim of driving proximity and going deeper into the *barrios*, the Group has also been "developing and piloting a franchise model that can be an answer for some small businesses that want to become an Ara store. Colombians are entrepreneurs and we must take advantage of that", explained Leandro in an interview to the Colombian economic newspaper Portafolio. In March 2023, Pedro Soares dos Santos announced the plan to invest one billion euros in Colombia over the next five years, focusing on growing Ara and further exploring new store formats, such as Bodega del Canasto. The ambition is to fly ever higher.



BODEGA DEL CANASTO

First opened in 2017 as a way of ensuring the supply of basic food products at very low prices to Venezuelans massively crossing the Colombian border in Cúcuta, Bodega del Canasto is a store format inspired by the cash and carry concept, focused on efficiency and very low prices, counting now with 49 stores and more than 350 references.



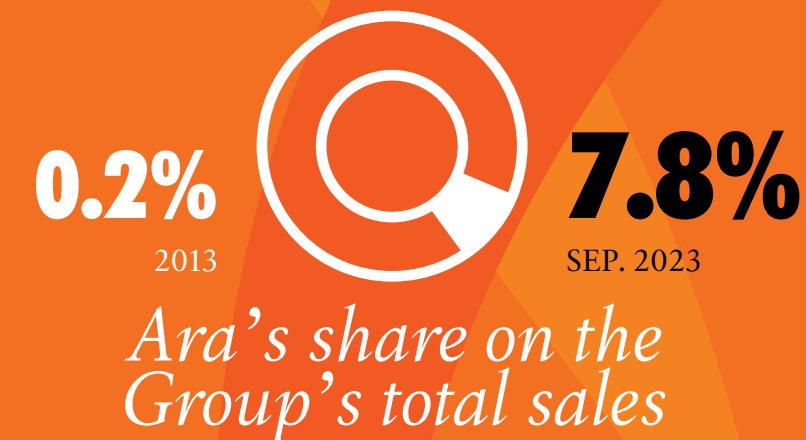
EXPLORING NEW FLAVOURS

In addition to the local flavours, there are some goods that Colombia does not produce but which have become more popular amongst consumers. Such is the case of the wines and olive oil produced in Portugal.

In the next five years, the Group plans to invest one billion euros in the expansion of the Colombian business.

ARA IN NUMBERS

Here are some of the facts and figures that show the Group's commitment to the Colombian market.



MASTERS of THEIR OWN FATE

Luisa Agudelo became the first woman to be an Ara franchisee in Colombia. Since June 2022 she owns her business and is fulfilling her family's dream.

IN the north of Bogotá, beyond the traffic and the hustle and bustle of the city streets, there's a neighbourhood called Encanto, the Spanish word for charming. Encanto is also the name of the rural Colombian community where a family with magical powers lives – and the Disney film that tells this story won the Oscar for Best Animated Feature Film in 2022. The real Encanto is a place where, far from the fairy tales of the cinema, Luisa Agudelo's dream comes true.

Luisa was born in Ibagué, the music capital of Colombia, in the Department of Tolima, into a family which, although not well-off, was steeped in values that instilled in them the importance of hard work and honesty from an early age. When she was eight, Luisa discovered a world that changed her life: her dad's handicrafts shop. It was there that she discovered her love of serving the community and her talent for connecting with people.

"Since I was a child, I've wanted to have a store, my own business", says Luisa with a smile on her face as she recalls her early years. When she was 12 years old, Luisa and her family had to move to Bogotá, the capital of Colombia, but her entrepreneurial spirit was undiminished.

Despite the difficulties, Luisa set out to find her place in the world of retail, to which she felt drawn, and she got a job on the staff of Ara as store supervisor in 2018. With time and thanks to her talent, she rose through the company ranks to store manager, a role where her dedication and enterprising spirit shone out, as they had already in her previous jobs. In all this time, she never let go of her dream of having her own business, and in her own mind this was the reason why she worked with such utter determination, confident that hard work is the best investment for a good harvest.

"Since I was a child, I've wanted to have a store, my own business", says Luisa with a smile on her face.

Luisa Agudelo
Ara Encanto, Bogotá



The first time that Ara invited her to become a franchisee, Luisa turned them down. Shortly afterwards, she remembered the last day when she could apply for the opportunity of a franchise from that company that had believed in her talent and had allowed her to train to be an owner, and so she decided to apply. "It wasn't easy," Luisa admits. She tells us of how she faced a series of challenges and obstacles: starting with an assessment with other colleagues who shared the same dream, to negotiating the complicated red tape for registering the store, coping all the time with the uncertainties and challenges faced by any new business owner. Each step of the way required tenacity and determination. After taking part in the procedure, Luisa tells us that she was given the address of what would potentially be her store: "I came with my family to look at the place. I've always relied on their support and I always ask their opinion". Once she saw the location for herself, she had no hesitation in calling the franchise team to tell them that she accepted the location for her store and that the name for her new business would have to be Ara Encanto, or in English, Ara Charm. Over the months that followed, the support from her managers and from Ara was fundamental in helping her design a commercial and marketing strategy for the store and so attract the right clientele. She also benefited from constant support in selecting her staff and managing the team, which proved crucial to the store's business success. Thanks to all this, Luisa was able to turn her vision into a prosperous and successful venture, meaning she has not only set up her own business, but is also an employer and able to back other people's dreams.

On 27 June 2022, Encanto opened its doors with a workforce of nine. "It was the fulfilment of a dream I've cherished since childhood. It's called Encanto because of the joy this gift has given me, and I hope all my neighbours can feel it too and like my store," she tells us. There are now eleven people working to make the store a byword for quality and affordable prices with good service, meeting the needs of the entire neighbourhood. "For me, it's very important to help people; it's very rewarding to create jobs, to be able to help families and be involved in improving their lives", Luisa stresses. For Luisa, being the first woman franchisee of Ara is not just an honour, but also a responsibility she has accepted with pride. She sees her position as an opportunity to inspire other women to follow their dreams and break down barriers, paving the way to diversity and equality in the business world. Luisa Agudelo's story goes beyond the pages of a magazine and offers real inspiration for people who long to make their dreams come true. She is living proof that the spirit of enterprise, dedication and love for one's communities can bring people together and change their lives. In less than a year, Luisa's store has nearly doubled in size, enabling her to stock more products so that her customers and neighbours in the local community can find everything they need for their homes, without having to look further afield. "The most important thing is to love what you do", she reflects wisely. Through her story, Luisa Agudelo has shown that, more than ever before: "Ara means colour, diversity and optimism, Ara means Colombia!"

"The most important thing is to love what you do."



FORMER ARA EMPLOYEES ARE BECOMING OWNERS OF THEIR OWN STORES

Colombia is the fourth largest economy in Latin America after Brazil, Mexico and Argentina. With more than 50 million inhabitants (Bogotá, Medellín, Cali, Barranquilla and Cartagena are all cities with a population of more than one million), it has the third largest population in Latin America. One thing the people of Colombia have to offer is a culture of business enterprise. There are 5.7 million registered businesses in the country, up by 13% from 2020, reflecting a broad entrepreneurship spirit. The combination of the country's own business culture and the Jerónimo Martins's interest in bringing economic, social and environmental development to Colombia has brought life to an initiative that sets out to invest in the entrepreneurial dreams of the Colombian people. The plan is for Ara to grow from the 15 franchises in 2023 and expand this business model in the coming years. The innovative franchising model that Ara has developed, was designed to transform people's lives by making their dreams come true.

VALUES MATTER

The Jerónimo Martins' values guide the Group every day. Marta Maia, Chief People Officer, explains that, no matter how different each country, culture or history may be, those common values move all employees in the same direction, united in a single attitude.



WE ARE WHAT WE DO



We all know what it means to talk about values and how important they are – or should be – in our life, whether at work, in our personal lives, within the family or in our dealings with others. At Jerónimo Martins, talking about values also means being aware of the guiding principles of the stewardship that has led us throughout our history and understanding what they tell us about who we are. Jerónimo Martins can trace its origins to an enterprising businessman from Galicia who set up shop in eighteenth century Lisbon, but the defining influence on the company is that of the family which has held the reins for more than a century. We are led today by the fourth generation of the family descended from Francisco Manuel dos Santos, a man whose life was an example of hard work, determination and social responsibility. These are qualities that his successors in the family line – Elísio Alexandre dos Santos and Alexandre Soares dos Santos – have kept alive to this day. This is the legacy we pay tribute to in the Jerónimo Martins Code of Conduct when we say: “Our values have always been present and are the strength that has led us along the way. More than words, they are actions that define how we act from day to day, how we treat our people and how they work with us. Our history bears witness to this at every turn because the values of an individual or an organisation are seen above all in their words and deeds.” Today, under the leadership of Pedro Soares dos Santos and with a workforce now in excess of 130,000, we are still inspired by the ambition of growth, by team spirit and mutual assistance, by rewarding individual and collective merit and by a sense of responsibility for the consequences of our decisions. It was in order to formally recognise and perpetuate this legacy that, in January 2023, we decided to codify and communicate our values in the different countries we operate in. We want future generations

of leaders in the Group to share our pride in what they inherit and to keep it alive. In the world we live in today, with all its complexities, distractions and adversities, which make leadership the art of navigating uncertain waters, values have a crucial role to play. They are the beacon that lead us to a safe harbour, as well as the anchor that keeps us true to ourselves and resolute in our decision to choose what is right. Our values define who we are and how we choose to conduct ourselves in business and in society. They are what unite us despite the great diversity in our group – much more than the fact that we speak different languages and live in countries as disparate as Poland, Portugal and Colombia – and they are also what make us unique. After a process in which all the Group Companies played an active role over the course of nearly a year, this is how we have defined the values and standards that are the backbone of our corporate identity. When values are inspiring and genuine, they are powerful factors in making organisations attractive in the labour market. Whilst it is true that the way we live and honour our values is the responsibility of everyone in leadership positions in Jerónimo Martins, as Chief People Officer, I realise that Human Resources teams have an additional role to play in ensuring that all our staff clearly know “what the Company stands for”. This is the underlying shared vision we need in order to face the challenges the future has in store for us.

MARTA MAIA



CHIEF PEOPLE OFFICER
 JERÓNIMO MARTINS

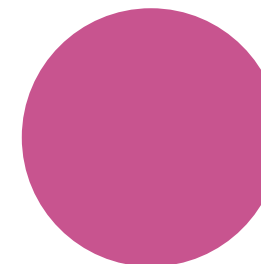
OUR VALUES

In the Jerónimo Martins Group, these are the values and the standards of conduct that we know are expected of us. It is with these values that we will continue to grow as a business and to foster the growth of our people. As we face the future, we know from our history that a sense of purpose has always been the real driving force behind success.



WE RAISE THE BAR

- I never settle** so I make sure what gets done is beyond expectations and I encourage others to do the same.
- I have a “can-do attitude”** and I am focused on being better in everything I do.
- I am ready to try** and take calculated risks without jeopardizing what needs to be done.



WE COUNT ON EACH OTHER

- I collaborate and share** so we can all discover new ways to achieve our goals.
- I welcome different perspectives**, and I respect the role and the work done by others.
- I value achievements** and celebrate success across the Group and Companies.



WE BELIEVE IN DOING THE RIGHT THING

- I don't lie**, and I am accountable for my decisions and learn from my mistakes.
- I treat everyone with dignity** and respect.
- I act ethically and with integrity** in everything I do.

TWO *Realms*

In a world where nature and time once danced in harmony, the disarray caused by climate change has shattered familiar rhythms. The arrival of the “global boiling era” described by the Secretary-General of the United Nations, António Guterres, encapsulates the urgency of a future on the brink.

WRECKS AFTER THE STORM

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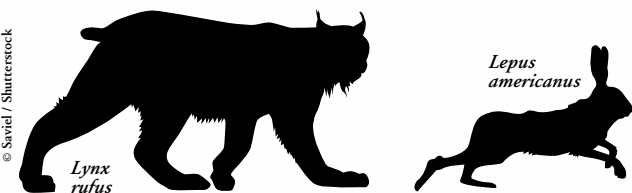


SAVING VENICE

IN July 2023, UNESCO recommended that Venice, Italy, be added to its List of World Heritage in Danger. Earlier in 2023, historic low tides dried up some of the city's smaller canals. In 2019, record floods swept through La Serenissima with alarming force — and the city is becoming more vulnerable to flooding as sea levels rise.

ECOSYSTEMS DISRUPTION

NATIVE to boreal forests in northern regions, the example of the snowshoe hare (*Lepus americanus*) demonstrates the impact of climate change on predator/prey dynamics. As snow arrives later and melts sooner due to global warming, the hares' white fur moult no longer aligns with the snow cover, making them more vulnerable to predators. This mismatch affects not only the survival of the hares but also of the predators, such as lynx, that rely on them for sustenance.



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CHASING ICEBERGS

EVERY year, travellers flock to the shores of Newfoundland, captivated by the icebergs journeying southward to the North Atlantic. However, the future of this enchanting spectacle is uncertain due to rapid glacier melting. The International Ice Patrol's iceberg monitoring reveals inconstant crossings at the 48th parallel north. While 1,500 icebergs crossed in 2019, subsequent years saw significantly fewer crossings. There were 169 in 2020, only one in 2021 and 58 in 2022.

OCEAN STREAMS COLLAPSING

A RECENT study published in "Nature Communications" suggests that the Atlantic Meridional Overturning Circulation (AMOC), a vital ocean stream system, might collapse as soon as 2025 due to climate change. The AMOC, a network of currents including the Gulf Stream, is a major driver of climate. It carries warm ocean water towards the pole, where it cools and sinks, driving the Atlantic's currents. But an influx of fresh water from the accelerating melting of Greenland's ice cap and other sources is increasingly smothering the currents. A collapse could influence temperature and precipitation patterns around the world.

HURRICANE PREDICTORS

DURING two decades of field observation, the breeding behaviour of a local population of veery thrushes (*Catharus fuscescens*) proved to be attuned to the intensity of the Atlantic hurricane season. Veeries nest in forests in the north of the United States and southern Canada and spend their winters in the Amazon region in South America. In the years of a more severe hurricane season, the veeries nesting in Delaware ended their breeding season and completed their annual moult early. By setting off on their southbound migration earlier, they avoided the worst of the storms.



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WEATHER-RELATED EVENTS

A REPORT by the World Meteorological Organisation reveals that, over the past 50 years, an average of one weather, climate or water-related disaster occurred daily, causing 115 deaths and 200 million US dollars in losses. These disasters have increased fivefold. Developing countries account for over 90% of deaths and climate-related hazards comprise 50% of all disasters. Hurricane Katrina, in 2005, was the most expensive catastrophe on record, causing an estimated 164 billion US dollars in economic losses.

FIRE TORNADOES

A FIRE tornado is a rare and incredibly powerful phenomenon that occurs when a wildfire, or a large, intense fire, generates a rotating column of air that rises above the flames. It emerges from a combination of intense heat, strong winds and certain topographical features that can influence air currents. With a warming atmosphere amplifying the likelihood of these extreme phenomena, understanding their dynamics is essential for predicting and managing future wildfire events.

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"Cerberus"

© Bara30 / Shutterstock

THE HOTTEST MONTH ON RECORD

JULY 2023 was Earth's hottest month on record at least since 1880. July's global average temperature of 16.95 degrees Celsius (62.51 degrees Fahrenheit) was one third of a degree Celsius higher than the previous record set in 2019. The month was 1.5 degrees Celsius warmer than pre-industrial times, the limit established by the Paris Agreement. In Italy, the heatwave was named "Cerberus" by the Italian Meteorological Society, after the three-headed monster that features in Dante's *Inferno*. The summer of 2022 was already the hottest in Europe on record.

THIRTEEN, THE FEARED

A very real fear for millions, to the point of affecting their everyday choices, the number 13 is known for its bad reputation. But the source of its ghastly power is still murky.



By the way, Feed has survived issue number 13. A stroke of luck?

BAD REPUTATION

IMAGINE you have this friend who is going to get married. Everything is planned down to the last detail and the invitations are on their way. But then, when the moment comes to open the card, a shiver runs down your spine when you look at the date: "Where did this crazy idea of getting married on the 13th come from? Well, let's just hope it doesn't fall on a Friday..." In any case, it's already doomed by bad luck. For many people, the same cautious feelings and assumptions apply to summer trips, contract signatures, difficult surgeries, big decisions. With so many free days on the calendar, why choose precisely the unlucky one? Plane rows and seats skip it, cruise decks omit it, hotel rooms and floors drop it. Even house owners avoid it. So, our fictional groom seems to be a gracious exception in the Western World.

DISPELLING THE SUPERSTITION

While the number 13 means bad luck for many Western cultures, in much of East and Southeast Asia, tetraphobia is the norm: in Chinese language (and Chinese-influenced linguistic sub-groups), the words for “four” and “death” are quite similar.

Conversely, the Tibetans regard the number 13 as holy, appearing frequently in Tibetan cosmology, history and religion, particularly Bon or pre-Buddhist. For instance, the early kings of Tibet began their reign at the age of thirteen, or else reigned for thirteen years. Heaven is described as consisting of thirteen layers.

The Ancient Egyptians believed that life as a spiritual journey unfolded in stages. Twelve of those steps occurred in this life, while the last, the 13th, represented a transformative ascension to the eternal afterlife.

The concept of new beginnings associated with 13 also prevails in Judaism, as Jewish boys become full adults at the age of 13 at the Bar Mitzvah (the ceremony for girls, the Bat Mitzvah, occurs when they turn 12).

There are also a lot of testimonials from people who consider 13 to be their lucky number.

Any sceptic would fight back:

“What can be so wrong about an odd natural prime number?”

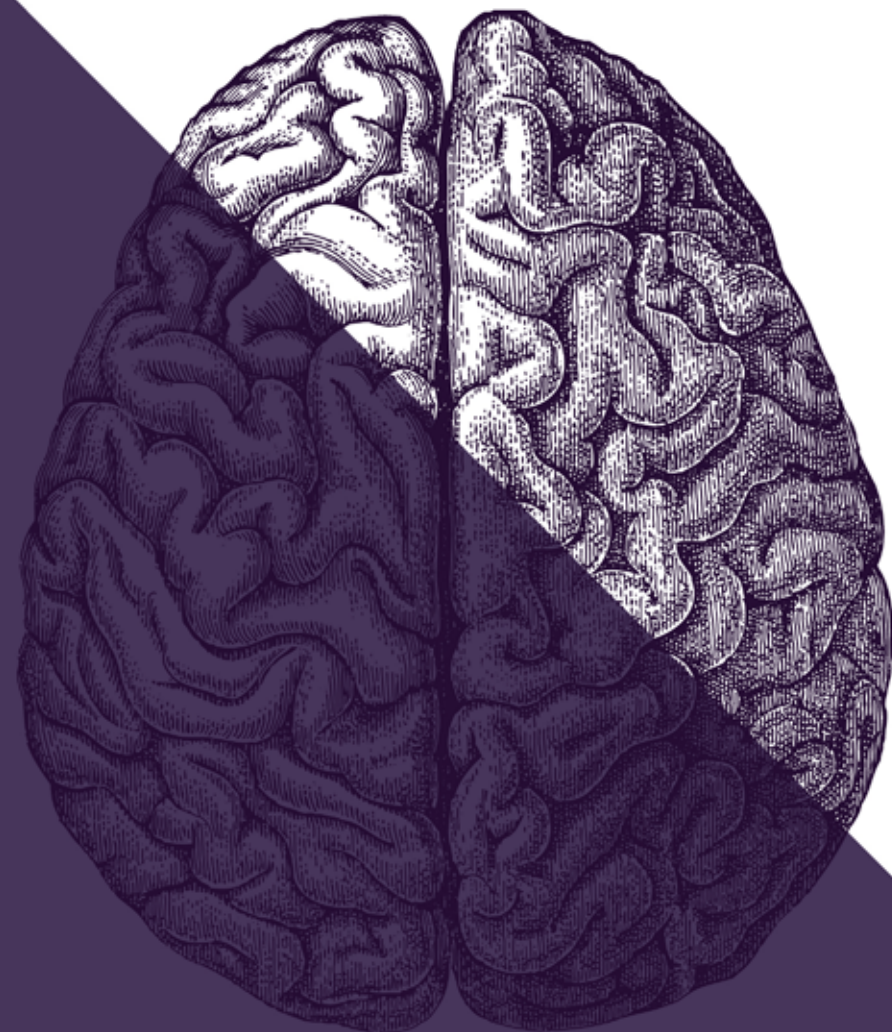
The unexplained fear of the number 13 can be traced to ancient times. An early myth involves one of the world’s oldest legal documents, the Code of Hammurabi, proclaimed by the Babylonian king, Hammurabi, who reigned from 1792 to 1750 BC.

Carved onto a massive, finger-shaped black stone stele, the code omitted a 13th law from its list. However, the omission was an error made by one of the document’s earliest translators, who neglected to include a line of text.

But the most popular theories revolve around uninvited guests: in the Bible, Judas Iscariot, the apostle who betrayed Jesus, was the 13th to arrive at the Last Supper; the mischievous god Loki joined another 12 gods at a dinner party at Valhalla, Norse mythology’s heaven.

Once there, he arranged for Hoder, the blind god of darkness, to kill Balder the Beautiful, the god of joy and gladness.

Another attempt to explain this superstition lies in the idea of perfection and completeness that is synonymous with 13’s predecessor: 12. There are 12 hours in a half-day, 12 months in a year, 12 days of Christmas, 12 apostles, 12 Olympian gods, 12 signs of the zodiac. Total balance.



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THE THIRTEEN CLUB

In 1882, a Civil War veteran named Captain Fowler (1827-1897), whose life was positively ruled by the number 13, created an organisation called the “Thirteen Club”, to prove there was nothing to fear about the number. The club was launched at 8:13 p.m. on a Friday, 13 January, in room 13 of his Knickerbocker Cottage in Manhattan. He and twelve men assembled for a symbolic dinner. They walked under a ladder and banner that read “Morituri te Salutamus” (meaning “Those of us who are about to die salute you”) to enter a room covered with spilled salt. Thirteen candles lit the first of 13 courses. So, almost every superstition was included in this dinner party. By 1887, the club had at least 400 members and counted among its honorary members five former US Presidents: Chester Arthur, Grover Cleveland, Benjamin Harrison, William McKinley and Theodore Roosevelt. The Thirteen Club no longer exists, but there are no reports of anything bad ever happening to its members.

QUALIFYING FOR LUCK

In F1, the number 13 was used only sporadically and, since 1974, the Venezuelan Pastor Maldonado has been the only pilot to break with the superstition and dare to use the number 13 on his car. He eventually won one race and, despite facing many crashes during his career, he always escaped without any major injuries. In 2022, Mercedes unveiled its W13, whose approval process was completed on 13 January. The team also pointed out that the crash test regulations were contained within Article 13: “Luckily, we’re not superstitious about these things!”, a spokesperson joked.



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APOLLO 13: HOUSTON, WE HAVE A NUMBER



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Apollo 13 is famously described as a “successful failure”: the crew never made it to the lunar surface, but the astronauts were brought home safely. The mission’s launch date written numerically was 4-11-70: if you add up the digits, you get... 13. The spacecraft was set to launch at 1:13 pm Houston time. Then, two days, seven hours, 55 minutes and 20 seconds later, on 13 April, one of Apollo 13’s oxygen tanks exploded. Curse or luck? The question remains. By the way, it was a Monday.

Each season has **13** weeks.

Police radio code **13** means major disaster activation.



13 is the Death tarot card. It represents the inevitability of transformation and growth.



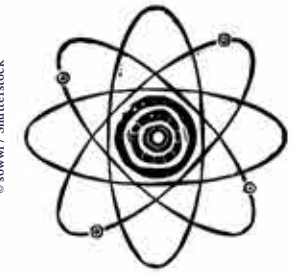
In the football pools, Totobola (in Portugal) and Totocalcio (in Italy), for many years the winner was the one who correctly guessed the results of the **13** games. Then, the system was adjusted to 14 games.



A standard deck of 52 cards comprises **13** ranks in each of the four suits: clubs (♣), diamonds (♦), hearts (♥) and spades (♠).

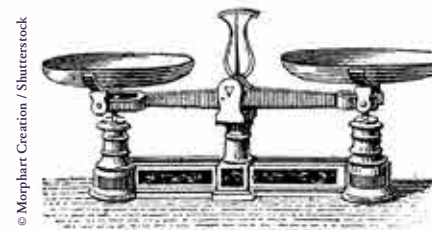
In the French region of Provence, **13** desserts are enjoyed after Christmas Eve dinner, traditionally representing Jesus and his twelve Apostles.

In the United States, the flag-folding ceremony involves **13** folds, with the **13th** fold representing the original **13** colonies.



13 is the atomic number for aluminium.

The Ethiopian Calendar has 12 months of 30 days each, plus five or six additional days (“the **13th** month”), which are added at the end of the year to match the calendar to the solar cycle. That means that the Ethiopian Calendar is seven to eight years behind the Gregorian Calendar.



The term “Baker’s Dozen” (or “Devil’s Dozen”) describes the former practice among bakers and other tradespeople of giving **13** items to the dozen as a safeguard against penalties for short weights and measures.



Alfred Hitchcock, the master of suspense, was born on the **13th** day of August in 1899 (it was a Sunday, not a Friday) and the title of his first movie was *Number 13*.



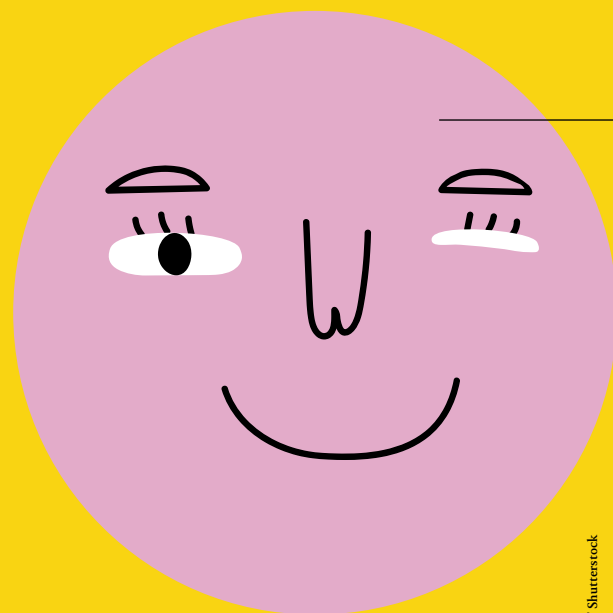
The number **13** has been used in literature to create intrigue and mystery. A famous example is Agatha Christie’s mystery novel *The Thirteen Problems*.

The fear of the number **13** is called **triskaidekaphobia**. The term was used as early as 1910 in *Abnormal Psychology*.



HUMOUR A SERIOUS BUSINESS

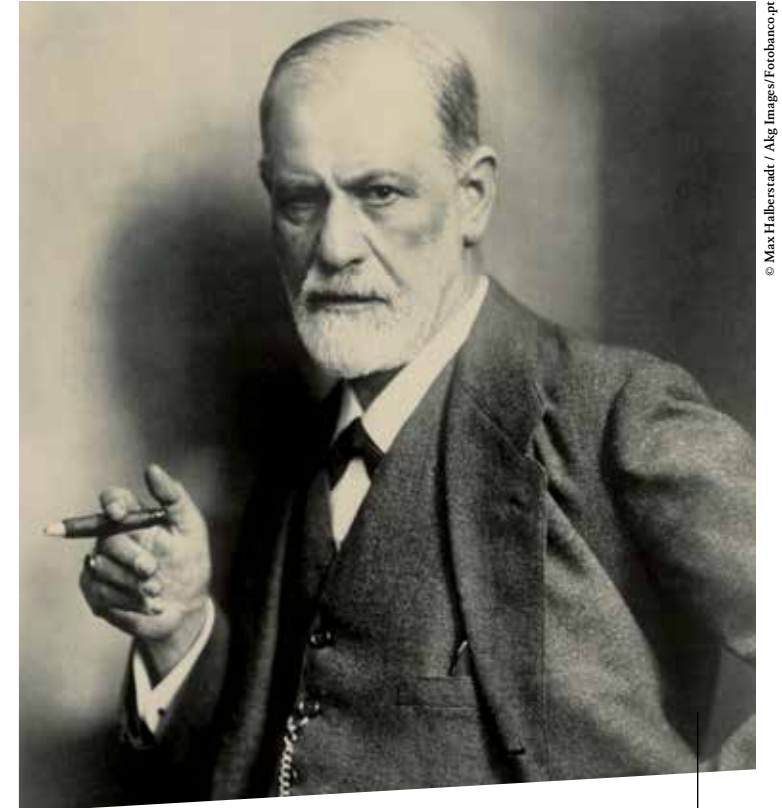
Amidst life's challenges, humour emerges as a serious yet often unheeded superpower unique to humans. Far beyond laughter, it forges bonds, fosters creativity, provides resilience and enhances people's overall health and well-being. But the connection between humour and medicine is much older and more meaningful than once thought.



WHEN people reflect on essential life skills, humour invariably emerges as a paramount element, often surpassing intelligence and even physical attraction as a desirable trait in partners, for instance. One of humanity's most intricate cognitive attributes, humour is universal, spanning cultures, languages and generations. It thrives on the unexpected, revels in the absurd, celebrates the playful and manifests in various forms, from jokes to moments of profound irony. Although humour is closely linked to laughter, the two are not synonymous, as laughter can stem from non-humorous stimuli and humour can be appreciated without the need for laughter.

This pervasive trait influences memory, decision-making and creativity, operating subtly in the grey areas of our emotions. Its boundaries are elusive, like a shifting gradient. Perhaps this is why the language palette is only capable of distinguishing between the "good" and the "bad". "Good humour" is characterised by well-being, energy, optimism and connection, while "negative humour" manifests as physical fatigue, reduced motivation and irritability. Unlike simple emotions, it is rarely precipitated by a single event, often resulting from the cumulative effect of various factors, such as stress, significant life events, relationship quality, social support, sleeping habits and physical exercise.

The term "humour" has its origins in ancient Greek humoral medicine, attributed to the likes of Hippocrates (460-370 BC), the Father of Medicine. This medical theory posited that the human body contained four primary humours: blood, phlegm, yellow bile and black bile, each associated with a specific bodily centre – blood with the heart, phlegm with the head, yellow bile with the liver and black bile with the spleen. The Humoral Theory was built on the notion that the balance or imbalance of these humours determined one's state of health or illness. Later, the humours were also used to refer to four individual psychological temperaments: melancholic, sanguine, choleric and phlegmatic. This reflected the belief that physical health and individual personality were interconnected.



Sigmund Freud (1856-1939)

WHAT'S SO FUNNY?

Over time, the word "humour" has evolved to encompass the quality of what is funny or comical. In the philosophical quest to define it - traditionally equated with laughter - three main categories of humour theories have emerged: superiority, relief and incongruity. The first hinges on the feeling of superiority over others, sometimes involving ridicule in the face of the misfortune of others. The relief theory of humour, proposed by Sigmund Freud (1856-1939), suggests that humour acts as a release valve for tension or repressed emotions. Finally, the incongruity theory argues that humour arises from the perception of a deviation between the expected and the real, as in the surprise effect of a pun.

The early development of laughter in humans even before speech (the question of whether babies have a sense of humour is an intriguing one) raises questions about the evolutionary role of humour and laughter. Researchers propose that laughter might have evolved as a vital social tool to enhance communication and trust within social groups, contributing to their survival in complex dynamics. The contagious nature of laughter is a remarkable aspect of this phenomenon. When individuals hear someone else laugh, it often triggers their own laughter, setting off a chain reaction of positive emotions and instilling a sense of belonging and even exclusivity within communities. Inside jokes provide a prime example of this, representing a form of shared humour understood exclusively by the members of a particular group.

In The Humoral Theory, by Hippocrates (460-370 BCE), there were four primary humours in the human body: blood, phlegm, yellow bile, and black bile. Later, they were linked to four correspondent psychological temperaments: sanguine, phlegmatic, choleric and melancholic. When all humours were in balance, physical and psychological well-being were achieved.

A LAUGH A DAY

Laughing, it is well known, is also good for health and well-being. Carlos Vidal, a popular physician and humourist in Portugal, has long been interested in the therapeutic benefits of humour, which in his life “emerged as a way to overcome boredom.” This interest began to take shape in his Master’s thesis: “Negative emotions are very well documented, but positive ones are not. And I wanted to lend credibility to humour from a scientific perspective.” However, studying it is still challenging right from the start because, even though “we all laugh, we don’t all laugh at the same things or with the same intensity. We need to have the variables well controlled, and it has to be something sustained over time to understand the beneficial effects.”

Laughing helps reduce stress and lower blood pressure and, by promoting vasodilation, it helps maintain healthy blood vessels. Laughter is also believed to be responsible for burning calories, “mimicking physical exercise,” as explained by the specialist in General and Family Medicine. In fact, “laughing about fifty times for a certain period of time is equivalent to 10 minutes on a rowing machine or a 15-minute bike ride.” In diabetes, it contributes to reducing glucose levels. Laughing activates the endocrine system, exercises the respiratory system, stimulates the brain and tears and aids digestion. By releasing endorphins, known as the body’s “natural painkillers,” it further relieves pain. Moreover, in women undergoing in vitro fertilisation, a post-intervention good mood increases the success rate.

Laughing helps reduce stress and lower blood pressure and, by promoting vasodilation, it helps maintain healthy blood vessels.

LAUGHTER, THE BEST MEDICINE?

It comes naturally to Carlos Vidal to use humour in his clinical practice. Nevertheless, he does so with caution, good judgement and consideration for the patient’s circumstances: “It’s excellent for building rapport, but it can also create a divide and disrupt the doctor-patient relationship. Like in a performance, I have to gauge the audience in front of me to establish a connection.” Here, beyond being a method, humour is invariably a prescription: “What we as doctors want is for people to have a better quality of life and lifestyle... going out and interacting with others will lead to lively, cheerful moments. Thus, it’s an indirect prescription.” The clinician compares the sense of well-being that these moments provide to going to the gym: “It’s difficult for them to leave their homes, but once they’re there, the feeling of well-being surpasses the inconvenience of going out and braving the rain. And what happens to our body physically is similar.”

Humour is often a powerful tool for breaking the ice between two people at odds with each other. By sharing a laugh, they may be able to see each other from a different perspective – and find common ground. Why? Again, reducing tension helps to build trust. Perhaps these adversaries could feel a sense of complicity in a funny topic.

A person in a good mood who can laugh is naturally more optimistic – and closer to finding a way out of a problematic situation. According to an article in *Psychology Today*, “optimistic people are better at coping with difficult situations and adversity than pessimistic people”. An excellent reason to follow the lead of Monty Python’s “Always look on the bright side of life” – a comic song that has become an anthem for the good things in life.



FOOLING AROUND

Jesters are enigmatic characters known for their humour and unconventional wisdom whose origins can be traced back to ancient Rome, where comic actors played similar roles. More than just comedians, they served as advisors and critics, using humour to convey their messages. Their unique blend of entertainment and insight made them essential figures in court life, capable of speaking candidly when others could not. Although the role of the court jester waned in Europe in the 16th and 17th centuries, some continued to thrive in less grandiose settings.

LAUGHING ACROSS BORDERS

Charlie Chaplin, a pioneer of silent film, masterfully told stories through physical gags, marking him as the father of slapstick comedy. His ability to transcend language barriers earned him global popularity, showcasing the universality of physical humour. Beyond comedy, Chaplin was an outspoken activist, exemplified by his powerful critique of fascism in *The Great Dictator* (1940), urging unity during World War II. His work is a testament to the timeless appeal of humour and his unapologetic political engagement.

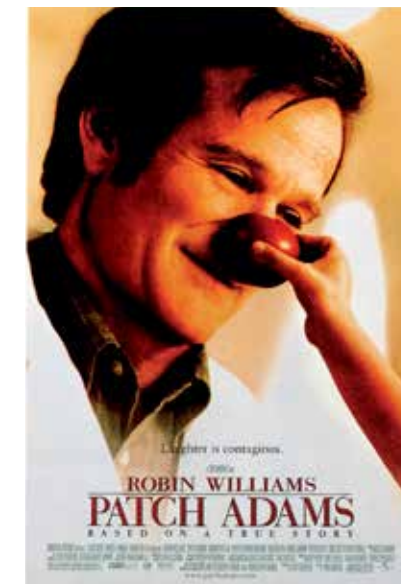


STANDING UP FOR MORE

The legacy of Ancient Greek comedy and humour can be seen in contemporary comedy traditions, such as stand-up comedy. The use of satire and parody as a way to reflect on society and its idiosyncrasies can be traced back to the comedies of Aristophanes and others, which served as a mirror to society, fostering laughter and intellectual reflection.

CLOWN DOCTORS

The use of humour in medical practice was popularised in the 1990s, following the international success of *Patch Adams* (1998). Starring Robin Williams, the movie is based on the true story of Hunter Doherty “Patch” Adams, an American doctor who brought about a revolution in hospital care. In 1971, he founded the Gesundheit Institute with a simple yet innovative approach for that time: bringing clowns to hospitals to provide joy and comfort to patients.



NO KIDDING

Laughter has not always had a positive connotation throughout history.

In medieval times, it was often associated with sin or madness. The Puritans, who emerged in the 16th and 17th centuries, held particularly austere views on laughter. They considered it a sign of frivolity and moral laxity.



THE LAUGHING PHILOSOPHER

Turning to Ancient Greece, the philosopher Democritus (460-370 BC), known as the “laughing philosopher,” embodied humour in his disposition and his tendency to find amusement in the foibles of his fellow citizens. He believed that laughter was a valuable response to the absurdities of human behaviour and the quirks of the world.

HANDICRAFTS WITH PURPOSE

The Wayuu people, an indigenous community in Colombia, is using ancient knowledge to craft handmade mochilas, strengthening its cultural heritage and gaining resources to develop the education of its children.

THE DESIGNS AND UNIQUE COLOURS OF WAYUU BAGS



This ancestral technique dating from the Pre-Columbian period is still being used to this day, thanks to the skills handed down by women of this ethnic identity in Colombia.

COLOMBIA is a country of traditions, a multicultural nation that reflects the diversity of this region with a blend of colours and ideas that are recreated in their handicrafts. Among the best known handcrafted products in this coffee-producing country are the bags made by Wayuu people, woven using distinctive materials and designs that make these objects unique.

Wayuu means “People of sand, sun and wind” in the native Wayuunaiki language, which belongs to the Arawakan family of languages and is a central element in the ethnic and cultural identity of these great craftswomen who have fought tirelessly for their rights. “There is no artistic creation of our own, as an indigenous people, that we have not conceived from the depths of our being and feeling as part of a millenia-old people” explains Ana Delia Fernández Sijuana, an indigenous member of the Wayuu people.



Wayuu means “People of sand, sun and wind”

THE bags are a prime example of Wayuu weaving crafts. They are handmade and the materials and threads used to make them are wild cotton and natural fibres from La Guajira (in Wayuunaiki: Wajira), one of the 32 departments forming the Republic of Colombia, which can be most accurately translated as “Fair Caribbean”. The artisanal fabrics of the Wayuu community play a very important role in their culture because they reflect the tradition handed down by women from generation to generation, and the expressive elements in the craft mean that each finished item has its own specific social value, responding to the demand for handicrafts. The Wayuu are said to have learned to weave from a mythical spider called Wale’kerü. This spider created magical pieces using the thread from her mouth and is reputed to have taught Wayuu women their crochet skills. Legend has it that the craft of weaving originated from this spider who secretly wove sashes and bags in the moonlight. One night a young girl came to admire her artistry with the thread and the spider was moved to offer to teach her what was her most precious skill: the art of weaving. The story also tells us that Wale’kerü fell in love with a Wayuu boy and ran away with him. The young man’s mother gave the spider some cotton for them to have some shelter in the wilds. The spider ate all the cotton and the thread ready for weaving began to come out of her mouth. As time passed, Wale’kerü began to teach the young women in the community to weave, but asked them to pay careful attention and not to let their minds wander, as she couldn’t always be there to teach them.



Since then, in Wayuu creation myths, weaving has been more than just a cultural practice and an ancestral tradition; it is a way of thinking about and expressing life, in tune with their feelings and desires. The rich Wayuu craft tradition has grown out of the secrets of weaving and their relationship with a particular feminine spirit. In Wayuu culture, the feminine spirit is as important and immortal as the women's weaving; indeed, the community is organised in matrilineal clans. In the home, women weave, care for their children and look after the house; and in the village, their mere presence serves as a symbol of respect and unity. According to research into the Wayuu tradition, when girls reach adolescence, they go to "Süttüsü Paülü'ü", an "enclosure" in the homestead where they learn the art of weaving and the wisdom needed to perform their role as women, the central pillar of the matrilineal Wayuu society. There, the adolescent girls are taught by their mother, grandmother and maternal aunts to spin thread, working the loom to weave hammocks and sashes and to make cords and bags. Throughout this process, the young women are accompanied by the spirit of Wale'kerü, the spider from Wayuu myth who taught them to weave. The Kanás symbols in Wayuu weaving are distinctive and each one has a specific meaning. Some of them indicate the paths, the poles and roofs of the homesteads, the allegory of horses' hoof prints in the ground and also figures that represent the social pyramid of this ethnic group.

This ancestral technique dating back to Pre-Colombian times is still used today. The motifs in these designs express how the Wayuu interpret elements of their everyday lives and often consist of geometric compositions that are repeated to form a pattern. The bright colours reflect the Spanish influence on the Wayuu during the years of colonisation through the use of acrylic threads that came from Europe in a wide palette of colours. The base of a Wayuu style bag is normally around 25 to 27 centimetres across (10 to 12 standard thumb widths), meaning that each woman weaver will have to turn the work 22 to 25 times to create each bag, a task that takes around 20 days. Like many cultures, the Wayuu have their god, who they call Maleiwa, the creator of all the wonders of nature and their principal god. There is also Juya, the god of rain, as well as Pulowi, the goddess of drought and the winds. Each clan is associated with one or several animals, providing an ancestral set of symbols. These are mainly mammals, birds, reptiles and insects. For example, the members of the Uliana clan are associated with the tiger and the rabbit, those of the Iipuan clan with the karikari hawk, and those of the Pushain clan with ants and other symbols representing how to interpret the world of this ethnic group, such as that of the snake, the fish eye and the turtle shell, among others. There are other symbols such as the great grebe, which represents the Epiyuu clan; the tiger representing the Urianaclan; the thickhead ground snake as the symbol of the Jusayuu; the donkey representing the Epiayuu clan, the ant as the symbol of the Pushaina and the partridge, which represents the Wouliyuu clan.

The community is organised in matrilineal clans.



FOR the Wayuu people, weaving symbolises a way of understanding life and celebrating their ancestral culture, as a bridge for communicating with the world and keeping their traditions alive. Women have been foremost in championing this legacy, opening up channels for bringing this tradition to others and handing down their skills from one generation to the next. In recent years, the bags have been widely marketed throughout Colombia and have become one of the country's most popular handicrafts. In 2011, Wayuu bags were declared an official designation of origin in order to protect the intellectual property of this indigenous community and its artisans. A controversy broke out at the time as the result of a Spanish magazine featuring the collection of a designer who presented several Wayuu bag designs as being her own. This led Artesanías de Colombia (a public-private enterprise defending the craftspeople) to deploy considerable resources in protecting not only the bags but the whole weaving culture of this community and many of the country's other traditional crafts.

THE issue of intellectual property rights is enshrined in the Free Trade Agreement signed with the European Union, meaning that Colombian handicrafts bearing the designation of origin enjoy protection in Europe. In recent years, 12,500 handmade mochilas from Colombia have been sold in Poland and Portugal. Colombia today has 12 artisanal products with official designations of origin, "becoming the country in Latin America with the highest number of Designations of Origin in the artisanal sector" says Adriana Mejía, manager of Artesanías de Colombia. In addition to recognising the collective efforts of local artisans and offering buyers a guarantee of quality, "the award helps prevent the sale of counterfeit products, which directly undermines producers, and protects the intellectual property rights of artisans," concludes Adriana Mejía. Every penny earned from the sale of handicrafts goes directly to the community of artisans involved in their production.



IN GUT

WE TRUST

When it comes to moods, decisions and behaviour, the brain in your head is not the only one doing the thinking. Made up of some 100 million nerve cells, a second brain lives secretly in the intestines. Welcome to the uncharted territory of the gut, whose silent power is revolutionising our understanding of overall health.

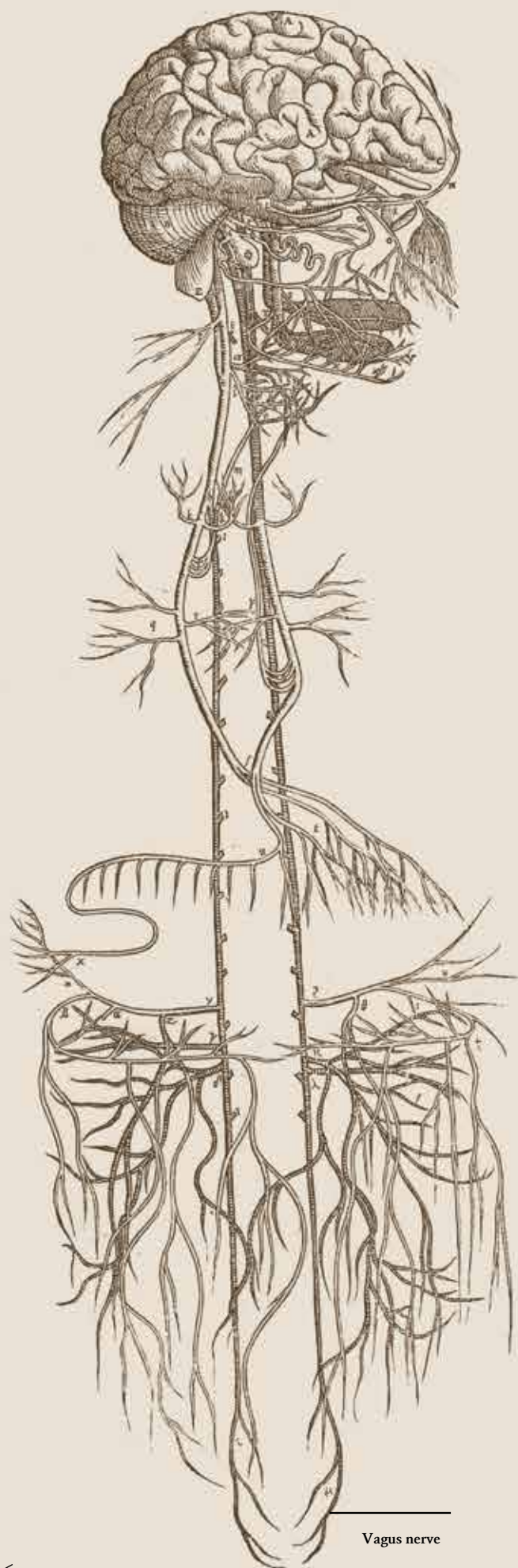


INSIDE OUR SECOND BRAIN

After endless weeks of waiting, the moment of the face-to-face encounter has finally arrived. Dinner is but an hour away, yet the clocks persist in their reluctant dance. With the last delicate touch of lipstick, the last magical sprinkle of perfume, the hours spent imagining all possible scenarios fade away to make room for reality. And once again, that age-old sensation of a tightening in the belly returns, like butterflies fluttering inside. What if the one to blame is the... gut? It could almost make Tina Turner sing: “What’s love but a second brain emotion?”

The answer lies in decades of research into the intricate link between the gut, the body’s largest surface, and the brain to explain why dating can induce a sensation akin to what we feel in other high-pressure situations: job interviews, school exams or public speaking events. This connection, known as the gut-brain axis, comprises a complex network of nerve fibres that communicate through the vagus nerve (which runs from the brain through the lungs, heart, spleen, liver and kidneys down to the intestines) and operates as a two-way motorway. 90% of signals travel upward, keeping the brain constantly informed about gut activity, while only 10% of the brain’s information travels downward, to the gut. Actually, in situations where the brain is compromised, such as due to injury or illness, the gut may continue to function on its own to some extent.

For decades, researchers held the belief that hormones served as an indirect conduit linking the gut and the brain. The prevailing notion was that nutrients inside the gut triggered the release of hormones, which entered the bloodstream several minutes to hours after eating, ultimately influencing brain function. While this hypothesis held some truth, recent research has unveiled a more direct and rapid means of communication underlying these gut feelings.



© Andrea Vesalius

Vagus nerve

The gut-brain axis comprises a complex network of nerve fibres that communicate through the vagus nerve.



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THE BRAIN BELOW

Our understanding of the gut is primitive compared to other sensory organs. Research into the enteric nervous system only began in the 1970s. In his ground-breaking work, Michael Gershon, known as the father of neurogastroenterology, highlighted the fact that the human gastrointestinal tract contains a complex network of neurons – more than 100 million of them – that can function somewhat independently from the central nervous system. This led to the popularisation of the term “second brain”. However, there was uncertainty regarding the exact process through which gut sensations are transformed into nerve impulses directed toward the brain.

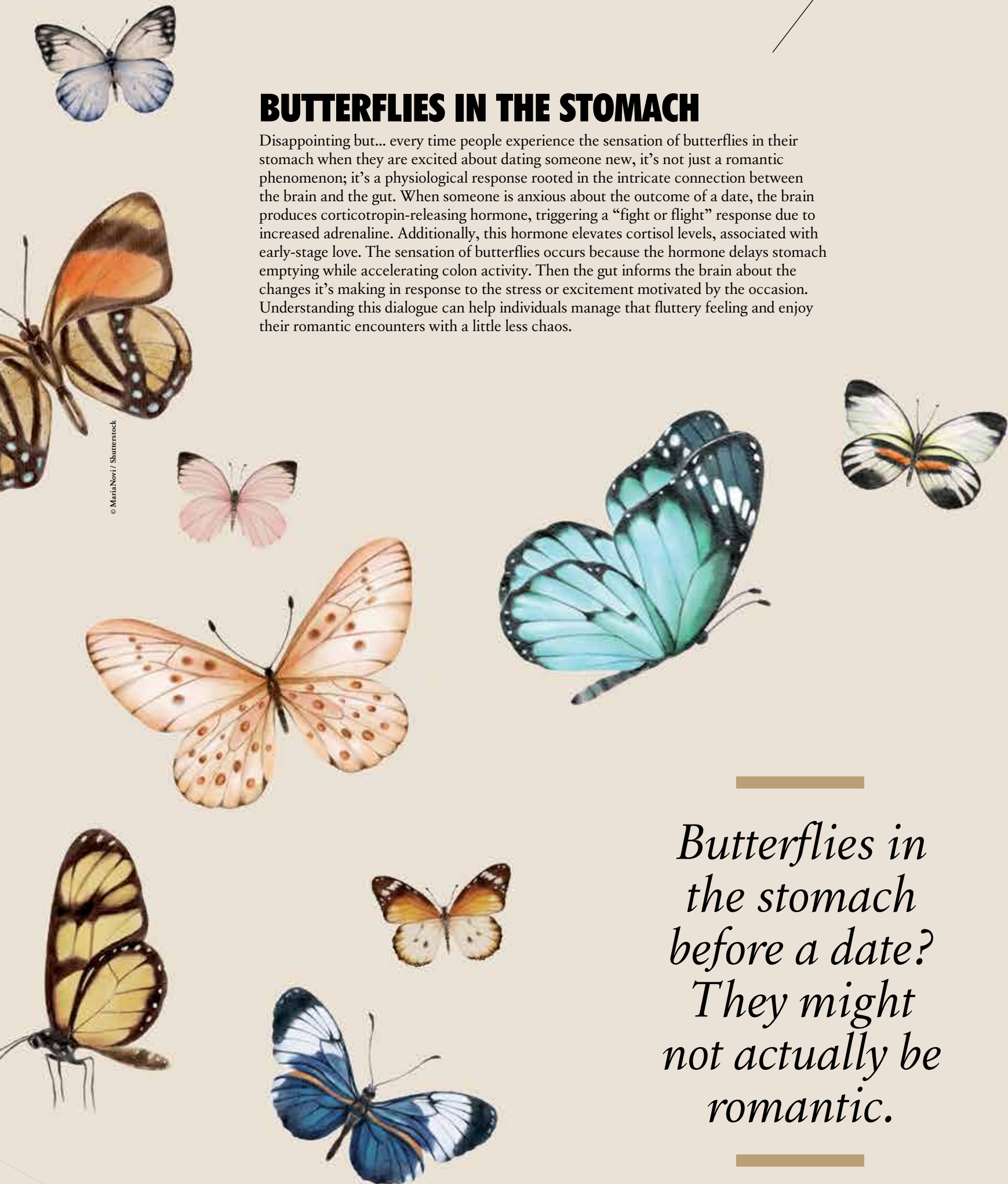
In 2015, a landmark study published in the *Journal of Clinical Investigation* by South American-born Professor Diego Bohórquez (he prefers to introduce himself as a “gut-brain neuroscientist”) and his research team at Duke University (USA) documented the existence of previously unknown gut-brain circuitry. In 2018, the same group traced a signal as it travelled from the intestines to the brainstem of mice. They were shocked to see the signal cross a single synapse in under 100 milliseconds – faster than the blink of an eye. There is a sensory stimulus from food particles, bacteria and pathogens that the gut promptly and constantly transmits to the brain, regardless of whether the person is asleep or awake, making sense of what was eaten.

Bohórquez’s fascination with this subject began in 2006 when he was a graduate student in nutrition. In one TED talk, he shared the story of a friend and her struggles with obesity and gastric bypass surgery. Before that, she couldn’t stand the smell or sight of runny egg yolks, but after the operation, she started to crave them. Rewiring the gut appears to physically change the perception of the taste of food in the brain. This is because enteroendocrine cells (or “gut sensors” as Bohórquez prefers) give the gut the ability to sense, as they contain some of the molecular receptors that allow our nose to smell, our tongue to taste.

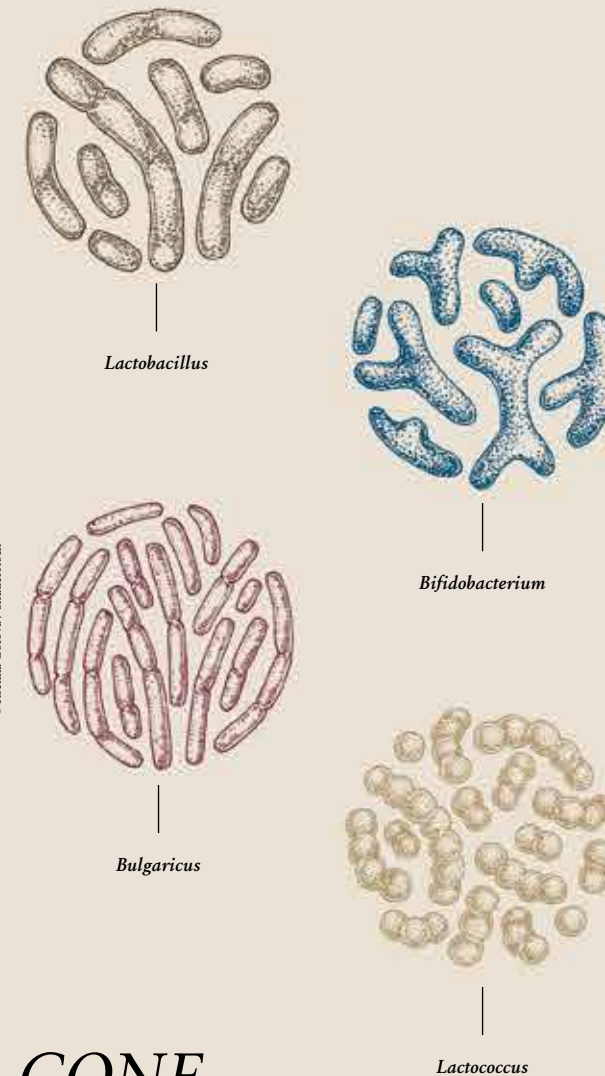
However, the role of these cells extends far beyond sensory perception. They respond by releasing neuropeptides, which have been extensively studied for their role in promoting feelings of fullness and satisfaction. Furthermore, the gut plays a crucial role in serotonin production, with over 90% of this “happiness hormone” being synthesised right there – and serotonin plays a pivotal role in mood regulation.

BUTTERFLIES IN THE STOMACH

Disappointing but... every time people experience the sensation of butterflies in their stomach when they are excited about dating someone new, it's not just a romantic phenomenon; it's a physiological response rooted in the intricate connection between the brain and the gut. When someone is anxious about the outcome of a date, the brain produces corticotropin-releasing hormone, triggering a "fight or flight" response due to increased adrenaline. Additionally, this hormone elevates cortisol levels, associated with early-stage love. The sensation of butterflies occurs because the hormone delays stomach emptying while accelerating colon activity. Then the gut informs the brain about the changes it's making in response to the stress or excitement motivated by the occasion. Understanding this dialogue can help individuals manage that fluttery feeling and enjoy their romantic encounters with a little less chaos.



Butterflies in the stomach before a date? They might not actually be romantic.



GONE WITH THE GUT

Chances are that everyone has experienced "gut feelings" at one time or another. An instant personal bond with a stranger or an inexplicable urge to skip a certain event. To many people, these feelings reflect instincts with no basis in reasoned thought. But the renowned Professor Emeran Mayer, who has studied brain-body interactions for the last forty years, has other ideas. In his book *The Mind-Gut Connection* (2016), he hypothesises that all emotional experiences are stored in the brain as "videoclips of emotional moments", each videoclip including both the experience as well as the associated gut reactions and gut sensations. Every emotion creates a subliminal mirror image in the gut in terms of distinct patterns of contractions, sensory signals and gut microbial signals, which are reported back to the brain and then added to the emotional videoclip as "the soundtrack to the image". This process begins in infancy and continues throughout life, facilitated by the exchange of biological signals between the gut, its microbes and the networks in the brain. Studies suggest that this process and the information are not consciously remembered, but they have a powerful effect on how people behave in response to certain stimuli.

TRUST YOUR GUT

"Tell me what you eat, and I will tell you what you are", wrote the French gastronome Jean Brillat-Savarin in 1826. Living organisms have depended on eating for survival for approximately a billion years, long before the development of breathing and cognitive thinking. Bohórquez says: "Most of the time we talk about the conscious self, but a huge portion of us is inside. We eat three times a day. That is modulating who we are."

This research contributes to a growing body of evidence that suggests that the gut-brain axis is a promising target for medical therapies in the treatment of conditions such as eating disorders, irritable bowel syndrome, autism or post-traumatic stress disorder. For instance, in cases of eating disorders, interventions might aim to rebalance gut microbiota, which can have a profound impact on appetite and food preferences.

As science moves forward, so does our understanding of the human body, leading the way to new discoveries and possible treatments (and precautions). What other secrets does the gut hold, waiting to be revealed through our cravings, feelings, decisions? Future exploration will continue to uncover the intricate mysteries of the never-ending conversation between the gut and the brain. For the moment, let them keep talking. One is about to tell the other that they're getting more and more listeners. Now, what's for dinner?

"Tell me what you eat, and I will tell you what you are".



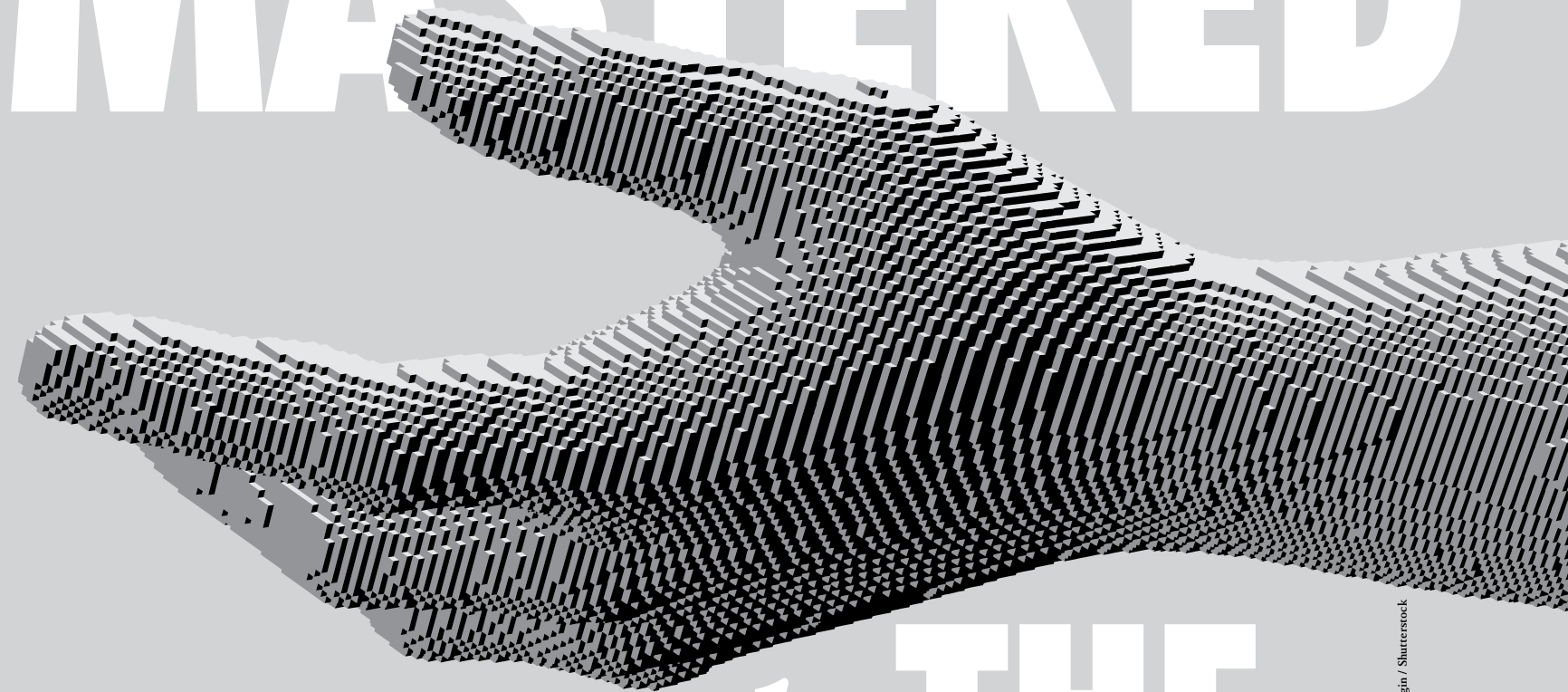
The French gastronome Jean Brillat-Savarin (1755-1826)

MASTER



THE
MACHINE?

Or,
MASTERED



by THE
MACHINE?

Artificial intelligence can offer many benefits to human creativity, but it also poses some challenges and risks that need to be addressed. By exploring the potential of AI in a responsible and ethical manner, new opportunities for human creativity and innovation can be unlocked.

AI KILLED *the* CREATIVE STAR?

THE question of whether machine-generated texts can be as creative and original as human-generated texts has been a topic of interest for many researchers, writers, and readers in recent years. While advances in natural language generation have enabled the creation of realistic and coherent texts on various topics and genres, there are still some subtle but significant differences between human and machine-generated texts that can be detected by careful analysis. In this article, we will explore some of these differences and how they can be used to identify the authorship of a book. One of the main differences between human and machine-generated texts is the level of creativity and originality. Human writers tend to use more diverse vocabulary, metaphors, similes, analogies, and other rhetorical devices to convey their ideas and emotions. They also tend to create more complex and nuanced characters, plots, and settings that reflect their personal experiences, knowledge, and imagination. Machine-generated texts, on the other hand, tend to rely more on existing data and information, such as books, articles, websites, and other sources. They often use more common words, phrases, and expressions that are frequently found in the corpus they are trained on. They also tend to produce more generic and predictable characters, plots, and settings that follow common tropes and patterns. By analysing the level of creativity, originality, vocabulary, and structure of a text, it is possible to distinguish between human and machine-generated texts. Human-generated texts tend to exhibit more variation, complexity, and depth, while machine-generated texts tend to be more uniform, predictable, and shallow. However, it is worth noting that some machine-generated texts can be very convincing and difficult to distinguish from human-generated texts, especially if they are designed to mimic a particular style or genre. Therefore, it is important to use multiple criteria and methods to identify the authorship of a book, such as stylometry, sentiment analysis, and content analysis.



© Logan / Shutterstock

Human-generated texts tend to exhibit more variation, complexity, and depth, while machine-generated texts tend to be more uniform, predictable, and shallow.

ARTIFICIAL intelligence (AI) is a rapidly developing field that has the potential to transform various aspects of human life, including creativity. While creativity is often seen as a uniquely human trait, AI systems are increasingly capable of generating novel and original content, such as music, art, poetry, and stories. The interaction between AI and human creativity can have several benefits and drawbacks. One possible benefit of AI interacting with human creativity is that it can enhance and augment human creative potential. AI systems can provide humans with new tools, techniques, and inspiration for creating content, as well as feedback and evaluation. For example, AI can help humans generate new melodies, harmonies, and lyrics for music composition, or suggest new plot twists, characters, and settings for story writing. AI can also help humans discover new styles, genres, and forms of expression, or combine existing ones in novel ways. AI can also assist humans in editing, refining, and improving their creative output. Another possible benefit of AI interacting with human creativity is that it can democratise and diversify creative production and

consumption. AI systems can lower the barriers to entry and reduce the costs of creating content, making it more accessible and affordable for more people. AI can also enable more people to participate in and enjoy creative activities, regardless of their background, education, or skill level. For example, AI can help people learn new languages, instruments, or artistic techniques, or provide personalized recommendations and feedback. AI can also foster cross-cultural communication and collaboration by translating and adapting content to different languages, cultures, and contexts. However, there are also some potential drawbacks of AI interacting with human creativity. One concern is that AI-generated content may lack the emotional depth, nuance, and authenticity of human-generated content. Another concern is that AI-generated content may perpetuate biases, stereotypes, and inequalities that exist in society, if the training data and algorithms used to create it are not diverse, inclusive, and ethical. Moreover, AI-generated content may raise questions about authorship, ownership, and intellectual property, if it blurs the line between human and machine creativity.

NOTE FROM THE EDITOR:

Except from the title, this article was written by the Microsoft Copilot AI-powered assistant based on ChatGPT. There are some clues that the text has no human origin. It uses some words and expressions that are commonly found in the body of natural language generation such as “the question of whether”, “careful analysis” or “there are also some potential drawbacks”. The text also lacks creativity and originality. For instance, it does not use metaphors, a rhetorical tool commonly used by humans to express an idea. The text has no emotions, there is no storytelling, no interesting plot. A human author would have used personal examples to create bonds with the reader. It follows a common, predictable structure: subject is introduced, pros and cons are listed, a general recommendation is the conclusion. A human author would have presented arguments to challenge reader’s assumptions, would have shown a way to encourage further readings and findings. There are also other clues to spot it is an AI-generated text. The “machine” advises the reader to use “stylometry, sentiment analysis, and content analysis” to help “identify the authorship of a book”. But there is no further explanation of these techniques and no useful concrete examples showing styles and approaches from different authors.

FAKE IT

'TILL YOU MAKE IT

As AI-generating tools become more sophisticated, regulation is likely to follow. In 2023, the world was deceived by AI. Fact-checking is now much more difficult, but it's a necessary quest.



THE "COOL" POPE

In early 2023, an image of Pope Francis went viral on the internet. It showed the pontiff wearing a white "puffed" jacket, in a style quite different from his usual. The image is fake. It was generated by the artificial intelligence platform Midjourney, but it set social media buzzing and puzzling.

BEHIND FAKE BARS

Former US President Donald Trump was all over X (formerly Twitter) and other social media channels, when a series of photos of him being arrested by New York City police officers hit the internet. Thousands of users got fooled. The images were AI-generated, created amid news that Trump was facing criminal charges.



EYES ON THE PRIZE

Can an AI generated image win a photography contest? It can. Berlin-based German photographer Boris Eldagsen deliberately submitted a DALL-E 2-created image to the Sony World Photography Awards, one of photography's most prestigious competitions – and won. Boris Eldagsen refused to accept the prize after revealing that the photo had been created using an artificial intelligence image generator. The photographer hoped to "drive debate" about a technology that is poised to alter how photorealistic imagery is defined and understood.



One possible benefit of AI interacting with human creativity is that it can enhance and augment human creative potential.



AI ON MY SLEEVE

Global musicians Drake and The Weeknd had their voices replicated by artificial intelligence, without their consent, to create a new song. *Heart on My Sleeve* was created by musical artist Ghostwriter, who upload it to streaming services – and it soon went viral. The fake duet was even submitted to the Grammy Awards, but it was not considered eligible. After complaints made by the two musicians and Universal Music Group, the song was taken down by the streaming services over copyright issues.



BOOKshelf

BOOKS FROM AROUND THE WORLD

Here is a handpicked selection of books that will allow the interested reader to further explore some of the topics addressed in this magazine. Because books are only alive if they are read, why not give these a try?

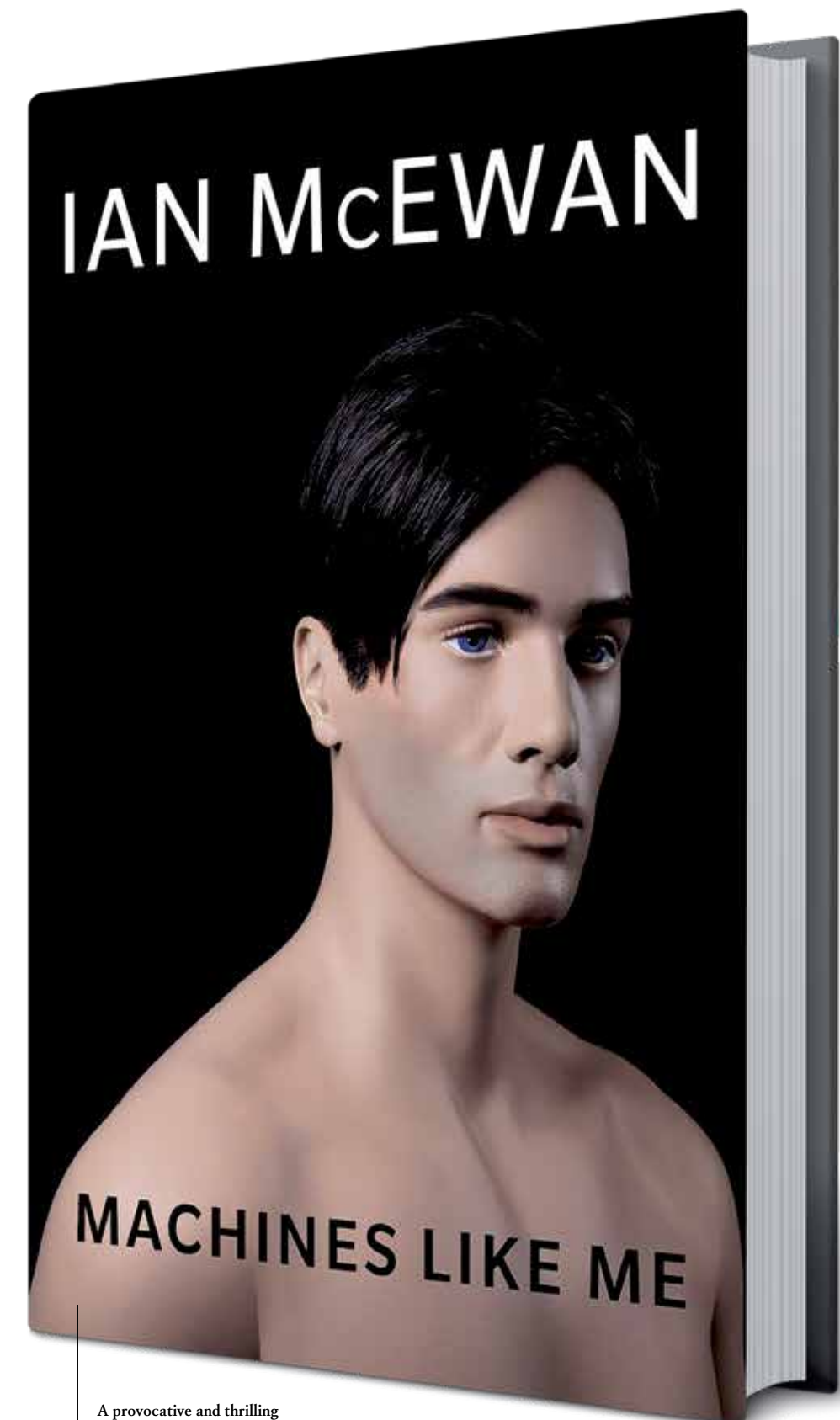
MACHINES LIKE ME

1.

What makes us human: our outward deeds or our inner lives?

IS it possible to design the perfect partner? Provocative and moving, Ian McEwan's *Machines Like Me* delves into the heart of these questions, wondering whether a machine can ever understand the complexities of the human heart. Against the backdrop of an alternative 1980s London, where the aftermath of the Falklands war and political turbulence set the stage for artificial

intelligence breakthroughs, the narrative follows a love triangle involving Charlie, Miranda and Adam, one of the first synthetic humans. A thought-provoking and entertaining exploration of love and morality, this book showcases McEwan as a master storyteller, leaving readers dazed by the subtleties of human existence.



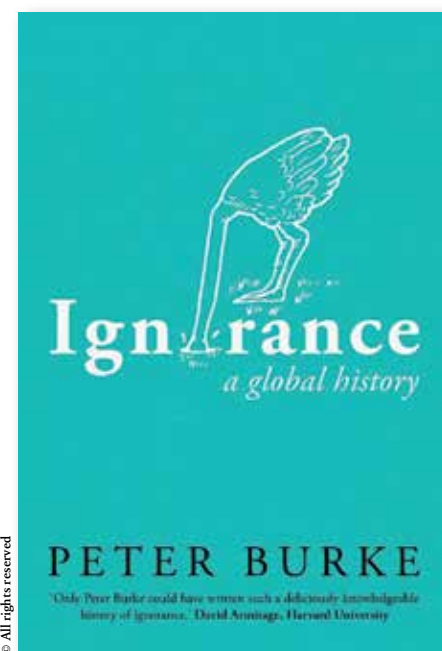
A provocative and thrilling tale that warns of the power to invent things beyond our control.

BOOKshelf

BOOKS FROM AROUND THE WORLD

IGNORANCE

A Global History

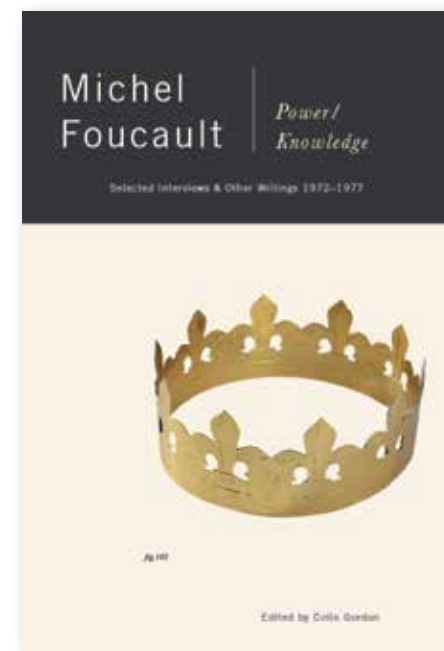


In today's hyperconnected information-flooded world, are we really less ignorant than our ancestors? *Ignorance: A Global History* is a thought-provoking journey through the ages, challenging the assumption of progress in knowledge. From the Renaissance to the present, each age believed itself more enlightened. Yet Peter Burke probes the shadows of our collective understanding.

Unveiling stories of ignorance in religion, science, war, politics, business and catastrophes, the author illuminates the nuanced nature of ignorance—be it genuine, simulated, conscious, or unconscious. The narrative delves into pivotal moments, such as the post-World War I map and contemporary dilemmas such as climate change denial. The result is a vibrant exploration of human knowledge and the importance of recognising its limits.

2.

3.



POWER/ KNOWLEDGE

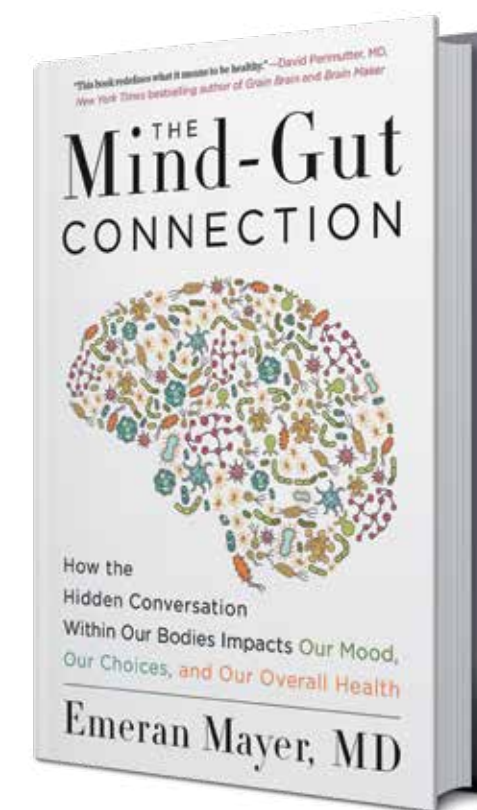
Selected Interviews
and Other Writings
1972-1977

The concept of *pouvoir-savoir* (power and knowledge) is a fundamental theme in Michel Foucault's historical studies of the genealogy of human sciences. This book presents a collection of essays and interviews that provide a comprehensive guide to his extensive work.

Relying on his investigations of prisons, schools, mental institutions, and other organised forms of social life, Foucault examines the mechanisms through which power infiltrates everyone's life, influencing their bodies, actions, attitudes, learning processes - ultimately, each person daily existence.

THE MIND-GUT CONNECTION

How the Hidden Conversation
within our Bodies Impacts our
Mood, our Choices, and our
Overall Health



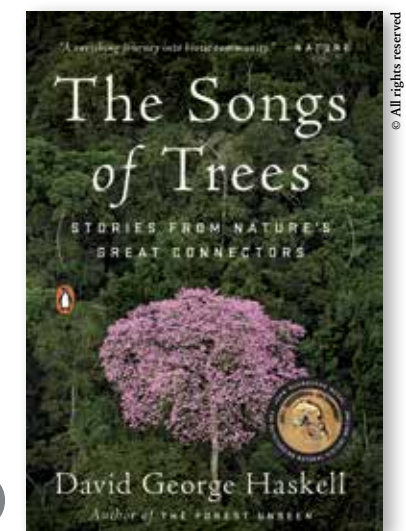
4.

At some point in our lives, we have all made decisions based on a “gut feeling” and felt butterflies in the stomach. While the gut-brain dialogue behind these phenomena has long been recognised, it has only recently been understood by modern science. In *The Mind-Gut Connection*, Emeran Mayer offers a revolutionary and provocative look at this developing field. A professor of medicine and executive director of the UCLA Center for Neurobiology of Stress, the author guides readers on how to harness the power of the mind-gut axis to take charge of their health and listen to their bodies' innate wisdom. Drawing on four decades of research, the author explains the impact of a mind-gut balance on a happier mindset, improved immunity, reduced risk of neurological diseases, and even weight loss. He also offers practical insights, advocating for simple dietary and lifestyle changes.

SONGS OF TREES

Stories from
Nature's Great
Connectors

David George Haskell's *The Songs of Trees* offers a contemplative reflection on the biological connections that underpin life. Acclaimed for his eloquent writing and deep engagement with the natural world, the author weaves scientific exploration with lyrical prose to explore the complex networks that surround all species, from humans to microbes and fungi. Through repeated visits to a dozen trees in different locations – in cities such as New York, in forests like the Amazon in South America and the boreal regions, as well as areas facing environmental challenges – Haskell unveils the profound interplay between human history, ecology and the lives of trees. Haskell's work serves as a reminder that, in a world full of walls and borders, life's essence and appeal emerge from the dialogue between relationships and interdependence.



5.

Feed.

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