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GEN Z'S LOVE-HATE RELATIONSHIP WITH THE DIGITAL WORLD

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EDITOR'S NOTE

Dear Reader,
Welcome back to Azeem English Magazine! We are thrilled to be back on track after an 8-month break. For 25 years, AEM has been a torch bearer of awareness and youth voice. Due to some financial and administrative constraints, we hadn't been able to continue publishing AEM. Alhamdulillah, we are back on track and look more excited and energetic than ever! Our latest edition features articles that spark curiosity, inspire change, and celebrate the human spirit, from science and technology to art and social impact. Happy reading, and thank you for being part of the AEM community!

Muhammad Ali Farooqi
Editor-in-Chief

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GENERATION BETA AND AI DRIVEN REVOLUTION

SOBIA NAEEM
WRITER

3 Minutes Read

2025 brought a considerable transformation due to the shift of the entire generation from generation Alpha to generation beta. Generation beta is the successor of generation alpha (2010-2024) ,which is further followed by generation Z (1996-2010) and millennials (1981-1996). As per demographic calculations generation beta will accumulate sixteen percent of the total population of the world. This will be the generation that is going to raise an entirely different world due invasion of artificial intelligence and technological advancement. Artificial intelligence has completely changed the aroma of the world although it premiered during generation alpha yet, its revolution will only be discerned by generation beta that will be beyond our expectations.

"For generation beta, the digital and physical world will be seamless " McCrindle.

Different generations experience different parental influences due to inculcation of advancements. Millennials are the ones who have glimpsed this world from no technology to a thorough transformation of the technological world and they possess exclusive perspectives about all these worldly modifications. Generation Z also nurtured in sway of social media and technology that imposed a significant impact on it but, generation beta, as predicted, will turn all the tables because of integration of artificial intelligence.

All the AI driven adaptive learning systems will revolutionize the education system for generation beta. Most of the daily life pursuits are assumed to be accomplished by artificial intelligence in the future that will fetch a

IMAGE SOURCE: LINKED-IN

considerable decline in physical man labour. Although generation Alpha has experienced the rise of social media and artificial intelligence yet, generation beta will enjoy the era where artificial intelligence will be entirely integrated into everyday life. Life will become fully robotic and automated to such an extent that if members of gen X (1965-1979) and baby boomers (1946-1964) find themselves in this future they would be shocked and struggle to believe their eyes. The sheer extent of technological advancement would be almost unimaginable to them.

Generation Beta will witness not only pros but also cons of Artificial Intelligence (AI). A notable disadvantage is the potential decline of manual labour, as AI-driven technology and social media platforms enable people to earn a living without engaging in physical work. This sedentary lifestyle may lead to various health issues due to lack of physical activities. Furthermore, the surge of AI may also displace job opportunities for humans, exacerbating unemployment and economic instability. As a result, Generation Beta will need to mitigate these negative consequences and seek alternatives to strike a balance between technological advancements and human well-being.

Generation Beta will be the first to truly inhabit a world where the virtual and physical are indistinguishable, where personal and collective realities are co-created. Their identities may not be confined to one geographical place but will be shaped by virtual spaces that feel as real as their hometowns. The concept of "privacy" will be foreign to them, not due to ignorance but because the boundaries between self and others will be so fluid—everything will be shared, analyzed, and molded into the very fabric of social interaction. Instead of book learning , they will develop algorithms that predict needs and desires, nurturing not just knowledge, but emotional intelligence tailored to the complexities of their ever-evolving world. In this landscape, human potential and artificial intelligence will no longer be separate; they will be one.

There are some queries about generation beta that will remain intact until the time reveals the truth. Whether generation beta will be able to maintain mental health and well being or will get disrupted due to rapid advancements? Climate crisis is also a pre prepared challenge for generation beta would expand in future or fall due to swift advancements and managements. One of the greatest challenges for generation beta is to maintain foreign policies in this highly advanced world,let the time to resolve these rhetorics.

In a nutshell, in order to succeed in the upcoming artificial intelligence driven economy, Generation Beta will have to develop essential skills including creativity, critical thinking, and emotional intelligence. Emotional intelligence, in particular, will play a vital role in enabling individuals to become more productive, empathetic, and effective collaborators. By prioritizing these developing digital skills, Generation Beta will be better equipped in the future to create a balance between human capabilities and AI technologies.

"A typical generation spans 15 to 18 years. As many critics of generational research point out, there is great diversity of thought, experience and behaviour within generations."

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MANIFESTATION: POWER OF MIND AND THOUGHT

NIKITA KUMAWAT
YOGA TRAINER, AMATEUR WRITER

3 Minutes Read

Whatever we aspire in life – whether it is to grow a career, build a dream house or wish for anything else – the thought: "I want this" arises. Once this thought happens, most people focus their energy towards that something through action and start working towards it.

The Power of thought

You cannot generate a thought without energy. It is just that because it is happening in such a random way, maybe it does not have the necessary energy to manifest itself.An angry mind and also a lustful mind are very

Clearing Your Mind

You have to first clear the space and then generate a thought consciously. If people have cleared their space and then have a thought, this thought really matters because this has come out of a conscious process. Once this thought is on like this and it is held in that clarity, it can be infused with energy. If you generate a thought in your mind consciously and if it is single-pointed, it will find its way in the world. It will manifest itself naturally. And if you have a little more control over your life energies, you can tweak it further.

Manifest What You Want

Everything we as human beings have created on this planet first found

IMAGE SOUURCE: UDEMY

create in this world, it is extremely important that first we learn to create the right things in our mind.
If you bring your mind to a certain level of organization, your body, emotion, and the fundamental life energies get organized in that direction. It would help to assist it with activity, but even without doing any activity you can still manifest what you want, if you organize these four dimensions in one direction and keep it unwavering in that direction for a certain period of time.

The Universe Yields to Both Faith and Commitment

Faith works only for those people who are simple minded. It never works for people who are thinking too much. A childlike person, who has a simple faith in his God or his temple, goes to the temple and says, "God! I want a house. I don't know how, but you must make it for me." There are no negative thoughts in his mind. Those things are completely removed by the simple act of faith. Now he believes that God will do it for him and it will happen. Is god going to come and build your house? No. I want you to understand God will not lift his little finger for you. What you refer to as God is the source of creation. As a creator he has done a phenomenal job.What is possible and what is not possible is not your business, that is nature's business. Nature will decide that. You just see what it is that you really want and strive for that. If your thought is created in a powerful way, without any negative thoughts bringing down the intensity of the thought process, it will definitely manifest.
Today, modern science is proving that the entire existence is a vibration. Similarly, your thought is also a vibration. If you generate a powerful thought and let it out, it will always manifest itself. Generally, people are using faith as a means to remove negative thought. It does not matter how much faith you think you have, somewhere doubts always crop up. The way your mind is right now, if God appears right here, you will not surrender to him; you will want an investigation as to whether he is really God or not. With this kind of mind, you should not waste your time on faith. There is an alternative which is commitment. If you simply commit yourself to creating what you really care for, now once again your thought gets organized in such a way there is no such thing as whether it is possible or not.
To create what you really care for, the first and foremost thing is that what you want must be well manifested in your mind. Is that what you really want? So, first of all you must explore what it is that you really want. Once that is clear and you are committed to creating it, now there is a continuous process of thought in that direction. Once you can maintain a steady stream of thought without changing direction, it will definitely manifest as a reality in your life.

DID YOU KNOW?

Snails have teeth. Between 1,000 and 12,000 teeth, to be precise. They aren't like ours, though, so don't be thinking about snails with ridiculous toothy grins. You'll find the snail's tiny 'teeth' all over its file-like tongue.

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GEN Z'S LOVE-HATE RELATIONSHIP WITH THE DIGITAL WORLD

HUMAIRA RIAZ
LAWYER,WRITER
STUDENT OF LLM HUMAN RIGHTS

3 Minutes Read

Let's be real—Gen Z runs on WiFi. We're talking about kids who learned to swipe before they could write, who treat TikTok like a second brain, and who have never had to sit through a dial-up internet connection (thank God). But here's the twist: this always-online generation is also the first to realize that maybe, just maybe, the digital utopia they grew up in is not all rainbows and viral memes.

Picture this: You wake up and grab your phone before your eyes fully focus. Instagram stories, TikTok notifications, a Snap from your bestie and all of this before breakfast.

It's normal, right? Except somewhere between the 10th meme and the 3rd "get ready with me" video, you start feeling... off. Not quite anxious, not quite depressed, but like you've been mentally snacking on junk food all morning. That's the Gen Z digital dilemma in a nutshell—connected but empty, informed but overwhelmed, seen but not really known.

Social media was supposed to be the ultimate hangout spot. Instead, it turned into a 24/7 talent show where everyone's performing, and the audience is both judge and competitor. You post a picture, then obsess over the likes. You share a thought, then brace for the comments. You watch someone's "perfect life" and wonder why yours doesn't look like that. The wildest part? Everyone's doing the same math in their heads, pretending they're not.

Then there's the identity circus.

IMAGE SOUURCE: DEEDAMCHRONICLE.COM

Offline, you're just you. Online? You're a mood board, a meme curator, a carefully crafted vibe. You've got your IG aesthetic, your Twitter persona, your TikTok niche. But when the screens go dark, who's left? Gen Z is the first generation to have to figure out who they are while constantly switching between IRL and URL versions of themselves. No wonder so many feel like they're starring in their own reality show—except there's no script, and the ratings are brutal.

Mental health talk is everywhere now, and that's a good thing. But here's the irony: the same apps that spread therapy memes and self-care tips are also the ones keeping teens up at night, constantly scrolling through bad news and worse takes. One minute you're learning about mindfulness, the next you're in a rabbit hole of climate crisis tweets and "everything is awful" reels. It's like having a therapist in one hand and a panic button in the other.

But Gen Z isn't just taking this lying down. They're the ones calling BS on fake positivity, inventing trends like "Instagram vs Reality," and dragging toxic hustle culture. They're putting apps on mute, choosing "soft life" over burnout, and using tech to actually connect instead of just perform. The kids who grew up with smartphones might just be the ones to teach us how to use them better.

At the end of the day, Gen Z's digital drama isn't just about screen time, it's about rewriting the rules of living in a world where online and offline aren't separate anymore. They're figuring it out in real time, making mistakes, and memeing about it along the way. And honestly? That's kind of iconic.

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DID YOU KNOW?

- The Moon looks upside down in the Southern Hemisphere. Compared to the Northern Hemisphere, anyway. This means that the 'Man in the Moon' is upside down in the Southern Hemisphere and looks more like a rabbit.
- You can yo-yo in space. In 2012, NASA astronaut Don Pettit took a yo-yo on board the International Space Station and demonstrated several tricks. It works because a yo-yo mainly relies on the laws of conservation of angular momentum to perform tricks, which, provided you keep the string taut, apply in microgravity too.
- Not only plants photosynthesise. Algae (which are not plants) and some other organisms – including sea slugs and pea aphids – contain chlorophyll and can also take sunlight and turn it into an energy source.
- You can be heavily pregnant and not realise. Cryptic pregnancies aren't that uncommon, with 1 in 500 not recognised until at least halfway through and 1 in 2,500 not known until labour starts.
- Bacteria on your skin cause your itches. Specifically, bacteria known as Staphylococcus aureus can release a chemical that activates a protein in our nerves. This sends a signal from our skin to our brains, which our brain perceives as an itch.

Stolen Childhoods: The Silent Crisis of Early Marriages in Pakistan

HAVEERUS MUGHAL
COLUMNIST, ENGINEER, AND THEATRE ARTIST

5 Minutes Read

In a small village in Sindh, 13-year-old Amina clutches her schoolbooks tightly; unaware that today is her last day in class. Tomorrow, she will be married to a man twice her age, her dreams of becoming a doctor slipping away. Amina is not alone—millions of young girls in Pakistan face the same fate. In communities where the sound of children's laughter should dominate the air, a quieter, more harrowing reality unfolds. Young girls, full of dreams and aspirations, are often forced to abandon their potential as they are pushed into the confines of early marriage. Rooted deeply in cultural norms, economic hardships, and a distorted sense of honor, this practice does more than rob these girls of their childhood—it hinders their growth, compromises their futures, and stifles the nation's progress.

Child marriage remains a pervasive issue in Pakistan, with approximately 18% of girls married before the age of 18, according to UNICEF. These numbers place Pakistan among the countries with the highest prevalence of child brides. Behind each statistic lies a life forever altered, redirected from education and personal development to the premature responsibilities of marriage and motherhood. The consequences are profound. Studies indicate that girls aged 15-19 report the highest incidences of domestic violence, highlighting their extreme vulnerability. The abrupt transition from adolescence to the demanding roles of wife and mother often results in severe mental health challenges, including depression, anxiety, and a profound sense of isolation. Many girls lack the emotional maturity to navigate these roles, leaving them feeling trapped and helpless.

The economic costs of early marriage are just as alarming. The World Bank and the International Center for Research on Women (ICRW) estimate that ending child marriage in Pakistan could lead to a 13% increase in women's earnings and productivi

IMAGE SOURCE : I PROBONO

ty. A study further suggests that each additional year a girl stays in school increases her future earnings by at least 10%. This underscores the immense economic potential squandered when girls are denied educational and vocational opportunities. Child marriage perpetuates a cycle of poverty, keeping women economically dependent and depriving society of their full contributions. The collective financial burden of lost productivity, increased healthcare costs, and continued dependence is staggering. On a national level, Pakistan's GDP could see significant growth if more women were empowered to enter the workforce instead of being confined to domestic roles from an early age.

Cultural and traditional mindsets further entrench the practice of early marriage. Poverty, illiteracy, and gender inequality remain primary drivers. Families in impoverished areas frequently view daughters as financial burdens, and marrying them off early is seen as a way to alleviate economic strain. The concept of "honor" also plays a pivotal role, with a girl's chastity often linked to the family's reputation. To safeguard this perceived honor, parents arrange marriages before their daughters reach adulthood, ignoring the long-term harm it causes. In many cases, the decision to marry off a girl is made with the belief that it provides security, yet in reality, it exposes them to greater vulnerabilities—violence, poor health, and limited economic prospects.

Pakistan's legal framework attempts to address this issue, but enforcement remains weak. The Child Marriage Restraint Act sets the minimum legal age of marriage at 16 for girls and 18 for boys, yet inconsistencies between federal and provincial laws create dangerous loopholes. While Sindh has set the minimum age for girls at 18, cases like that of 14-year-old Arzoo Raja in Karachi, who was allegedly forced into marriage under the pretext of religious conversion, reveal how legal gaps and weak enforcement continue to fail young girls. Without stringent legal mechanisms and proactive enforcement, laws remain mere words on paper. It is imperative that special courts be established to handle child marriage cases, that digital birth registration be made mandatory to prevent falsification of ages, and that strict penalties be imposed on those who violate the law.

Education remains the most formidable barrier against child marriage. Girls who stay in school are significantly less likely to marry early, as education equips them with knowledge, skills, and a sense of agency. However, the lack of accessible educational facilities in many parts of Pakistan, combined with societal attitudes that discourage female education, allows the cycle to persist. According to UNESCO, only 44% of girls in rural Pakistan complete primary school. The impact is devastating—not only limiting their personal growth but also reinforcing a cycle of poverty and dependence that affects entire communities. Countries like Bangladesh have successfully reduced child marriage rates through conditional cash transfer programs, where families receive financial assistance if they keep their daughters in school. A similar initiative in Pakistan could have a transformative effect.

The repercussions of early marriage extend far beyond individuals, impacting the broader societal framework. Health complications from early pregnancies, such as

obstetric fistula and increased maternal mortality, place additional strain on an already overburdened healthcare system. Children born to young mothers are more likely to face health and developmental challenges, perpetuating intergenerational cycles of disadvantage. The societal cost of early marriage is immense, encompassing lost human capital, increased healthcare expenses, and diminished economic productivity.

Addressing this multifaceted issue requires a comprehensive approach. Strengthening the enforcement of existing laws is an essential first step, but it must be accompanied by grassroots awareness programs to challenge and change entrenched cultural norms. Families need to understand that educating their daughters is not just a moral imperative—it is an economic and social necessity. Community-led initiatives, media campaigns, and religious leaders advocating against early marriage can help shift mindsets at the grassroots level. Economic support programs such as vocational training and employment opportunities for women are crucial in breaking the cycle of dependency and empowering them to make independent choices.

The stories of young girls who have defied the odds serve as a testament to the transformative power of education and opportunity. Malala Yousafzai's journey from being a schoolgirl advocating for education to a Nobel Prize laureate underscores the profound change that occurs when a girl is given the chance to pursue her dreams. Similarly, grassroots organizations like Bedari and Aahung Foundation are working tirelessly to combat early marriage through education, community engagement, and policy advocacy. These efforts, though commendable, require greater support and scaling to address the issue on a national level.

The time to act is now. We must push for stronger enforcement, support grassroots organizations, and, most importantly, shift our mindsets. Every girl deserves the chance to dream, learn, and lead. Will we allow another generation to be lost, or will we fight for their future? The answer to this question will determine not only the fate of millions of young girls but also the direction of Pakistan's progress. Ensuring that every girl is given the opportunity to pursue education, independence, and self-determination is not just a fight for gender equality—it is a fight for a stronger, more prosperous nation.

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DID YOU KNOW?

- NASA genuinely faked part of the Moon landing. While Neil Armstrong's first steps on the lunar surface were categorically not faked, the astronaut quarantine protocol when the astronauts arrived back on Earth was largely just one big show.
- Earth's poles are moving. This magnetic reversal of the North and South Pole has happened 171 times in the past 71 million years. We're overdue a flip. It could come soon, as the North Pole is moving at around 55 kilometres per year, an increase over the 15km per year up until 1990.
- You can actually die laughing. And a number of people have, typically due to intense laughter causing a heart attack or suffocation. Comedy shows should come with a warning.

IMAGE SOURCE : TEAMLY

THINK-IT - COST MANAGEMENT

MUHAMMAD SAEED BABAR
MANAGEMENT CONSULTANT FCMA, MS(FIN.)

3 Minutes Read

Today's competitive economy demands that we must watch our costs very carefully. For small entrepreneurs it is even more important in the face of market forces that are favourable to large corporations with big advertising budgets. Because through advertising these large corporations create brand image and demand higher prices which is not possible for the new entrants or small entrepreneurs. Since the selling price is mostly controlled by the market so most entrepreneurs are left with to manage their costs to be profitable.

Cost has three elements viz. (1) Raw Material Costs (2) Labour Costs and (3) Overhead Expenses. Raw material costs can be controlled through efficient buying and also through substitution i-e using substitute materials. Efficient buying includes exploring sources i-e buying directly from the first source that will not include the cost of intermediaries profit margin. Another option is to buy a discount quantity. Yet another option is to buy in quantity that does not require large storage space because that attracts additional storage costs, this technique is called JIT - Just in Time. But that requires coordination between you and your supplier. You can also use negotiation techniques to get a better price from your supplier. Finally, you can use online comparison sites to find the best deals for the items you need. Another way to reduce raw material cost is to control wastage. This can be done by tracking and managing your inventory, as well as analyzing your production process to identify any areas where waste is occurring. Additionally, you can implement quality

control measures to ensure the quality and quantity of raw materials used.

Labour costs can be controlled by streamlining production processes and automating processes where possible. Training your labour force goes a long way in reducing your labour cost through productivity enhancements. Better working environment e.g adequate rest time and good behaviour of supervisors also help in increasing productivity. It is said that rest is a weapon that we must use. Additionally, providing incentives for employees to be more productive can also help in reducing labour costs. Finally, creating a culture of open communication and feedback will help employees feel engaged and valued, leading to higher productivity.

Raw material and direct labour cost are direct costs that can be traced to products relatively easily. But other costs such as support services cost e.g. supervision, quality control, utility costs etc. are difficult to trace to products and its management. Therefore, it is important for businesses to track these costs accurately in order to monitor them. This data can then be used to make decisions about pricing, budgeting, and product performance. For this purpose ABC – Activity Based Costing system is used. The rationale behind this technique is that cost does not occur on its own. Its occurrence is due to some activity. If we trace these costs to activities that cause it to occur then if these activities are managed then the costs would automatically be managed. This gives us a better understanding of where costs are occurring and allows us to make better decisions about how to manage them. ABC also allows us to identify potential cost savings and opportunities for improvement.

First track all activities that a firm undertakes to manage its affairs such as production, accounts, management, selling etc. Take all these expenses from accounts books and then distribute these costs to activities using activity cost drivers i-e what drives these costs e.g. salary expense can be distributed using cost drivers such as direct production, quality control, supervision etc. If you design your production system in such a way that each subsequent process is responsible for the quality of its previous process then there is no need for quality control and you can save this cost.

Once you have successfully determined activities then you can analyse your activities by categorising it such as value added, non- value added and further analysing non-value added activities into necessary and can be deferred. In this way you can also reduce your costs by deferring activities not required right now and also reducing activity level of non-value added.

Here is the graphical representation of Activity Based Costing:

Next step is analysis of activities:

Besides Activity Based Costing, quality control techniques are also essential for becoming competitive. For example Fishbone Diagram - for finding product defects, KJ Method for solving production process inefficiencies etc. There are seven basic tools of quality control that are popularised by the Japanese. They used these tools extensively to become world no. 2 economy just behind the USA. These are (1) Fishbone Diagram (2) Check Sheets (3)Control Charts (4)Histogram (5)Pareto Chart (6) Scatter Diagram (7)Flow Chart.

The phrase "Quality is free" is a concept popularized by Philip Crosby in his 1979 book of the same name. It essentially means that the costs associated with improving quality are outweighed by the savings gained from reduced defects, rework, and waste.

Here's a breakdown of the core idea:

Cost of Poor Quality (COPQ): This includes all the expenses related to producing something that doesn't meet the required standards. Examples:

Internal Failures: Scrap, rework, machine downtime
External Failures: Warranty claims, customer returns, lost sales due to reputation damage
Appraisal Costs: Inspections, testing
Prevention Costs: Training, quality planning, process improvement

Investing in Quality: By focusing on prevention and early detection of issues, companies can significantly reduce COPQ. This might involve:

Employee training: To improve skills and understanding of quality standards
Process improvement: To streamline operations and minimize errors
Robust quality control systems: To identify and address problems quickly

The "Free" Aspect: While there's an initial investment in quality improvement activities, the long-term savings from reduced COPQ often far exceed these costs. This is where the idea of "quality being free" comes from.

By embracing a culture of quality, businesses can gain a significant competitive advantage, improve customer satisfaction, and ultimately increase profitability.

We ignore this important factor of cost saving. ABC + Quality Control will lead to cost saving.

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FACTS YOU NEED TO KNOW!

- Your nails grow faster in hot summer. This is probably due to increased blood supply to the fingertips. It could also be because you're less stressed while on holiday so less likely to gnaw away at 'em.
- Insects can fly up to 3.25km above sea level, at least. Alpine bumblebees have been found living as high up as 3.25km above sea level and could even fly in lab conditions that replicate the air density and oxygen levels at 9km – that's just higher than Mount Everest.

A TALE OF BETRAYAL AND RESILIENCE

MAIMOONA REHAN
WRITER

3 Minutes Read

Friendship is often considered sacred, a bond built on trust, loyalty, and mutual respect. But sometimes, we unknowingly invite a snake into our lives, cloaked in the guise of a friend. I learned this the hard way when I was betrayed by someone I trusted, a person who turned my vulnerability into her weapon.

It all began with a secret I shared—a secret I'd heard but denied and warned her never to repeat. I thought I could confide in her, but I was wrong. Not only did she betray my trust, but she also twisted the situation to make it seem like I was the culprit. She spread the secret to everyone involved and orchestrated a confrontation. There I was, standing in front of those people, feeling exposed, humiliated, and powerless. My heart sank as I saw her smiling, reveling in my discomfort.

Her calculated actions left me half-dead emotionally, and her attempt to manipulate me when caught red-handed was almost impressive in its audacity. She apologized later, seeking forgiveness with an air of insincerity. For the sake of closure and peace, I forgave her. But her betrayal didn't end there.

Soon, she began spreading another rumor, claiming that I forgave her because she had cried and mentioned losing her father. She played the sympathy card to gain attention, conveniently omitting the truth. In an attempt to clean up her mess and protect the people whose secret was at the center of this drama, I reached out to them. But even then, I couldn't shake the realization that I was helping someone who had consistently hurt me.

This experience taught me a valuable lesson: trust, once broken, is almost impossible to mend. A person who

IMAGE SOURCE: JOELKME.COM

deceives you once is likely to do it again if given the chance. It's crucial to remain vigilant and protect yourself from such toxic individuals. If you keep offering kindness to a snake, it will eventually inject its venom into you without warning.

Encountering someone like this demands a strategic approach. First, you must limit your communication with them. Don't offer them opportunities to use your words or actions against you. Next, change your behavior toward them—let them see that the good old version of you, the one they took for granted, no longer exists. Your indifference and self-respect are the best forms of revenge.

When they try to spread lies or manipulate others, counter their attacks with calm but firm responses. Don't allow them to control the narrative. Finally, monitor their actions from a distance. Stay informed about what they say or do, so you're never caught off guard again.

This experience was a painful reminder that not everyone who claims to be a friend is genuine. True friends uplift you, protect your secrets, and stand by you in times of need. Those who betray you don't deserve a place in your life. Remember, forgiveness is for your peace of mind, but forgetting isn't mandatory. Betrayal leaves scars, but those scars make you wiser and stronger.

3 STEPS TO PICKING OUT YOUR DREAM PAINT.

Moving into a new house can be quite an experience. You are totally in a new zone, surrounded by new ceilings and floors near stairs in an entire new layout. You want your home to look the best, so it's important to pick out the right kind of paint. Of course, in a single article, we can't show you absolutely everything that you need to know about moving into your new house, but we are going to try to give you some good tips on picking out a new house quality house paint.

1. Match it. In a new house, paint is pretty difficult as it is in, and you definitely don't want to paint your house a second time. Make sure whatever kind of house paint that you buy matches up with your existing paint. Maybe take a picture or find out exactly what kind of paint you have in your house right now so that when you go to the hardware store, you can show them exactly what you need.

2. Buy high-quality paint. Take a look around at the different types of paint that are available for you to buy in the store. You will quickly notice that paint varies in quality drastically and you generally get the way you pay for it. Granted, you have to make sure that you're not getting ripped off and you really are getting a good deal, but if you are serious about making money on your house, try to buy the best type of paint that you can afford.

3. Ask a Professional. It's okay if you don't know everything about home remodeling. Some people do it for a living. Builders, contractors, subcontractors and other home decorators might be able to give you some words of wisdom and help that you might not be able to get otherwise. Don't be afraid to ask. Just ask them for a little help and you might be able to save yourself some time and headaches.

IMPORTANCE OF READING THE NIKAH NAMA FOR GIRLS

LAIBA KHALID
WRITER, POETESS AND COLUMNIST

3 Minutes Read

The *Nikkah Nama,* or marriage contract, is an essential document in Islamic matrimonial practices. It (marriage contract) outlines the rights and responsibilities of both spouses and serves as a legally binding agreement. Unfortunately, in many cultures, particularly in South Asian societies, women frequently neglect to read or fully understand this document before signing it. It is crucial for girls to read and comprehend their *Nikkah Nama,* from both cultural and religious perspectives. Marriage in Islam is regarded as a sacred covenant. The Qur'an emphasizes the importance of mutual consent and understanding in the marital relationship. Allah states in the Qur'an:"And they (women) have rights similar to those (of men) over them in kindness." (Qur'an 2:228) This verse underscores the equal standing of women in the marriage contract. Islam grants women the right to stipulate conditions in their *Nikkah Nama* to safeguard their rights and ensure a harmonious marital life.

In many cultures, the *Nikkah Nama* is often treated as a mere formality, and traditional practices sometimes discourage women from questioning or negotiating its terms, reinforcing patriarchal norms, which can lead to situations where women unknowingly waive their rights, such as the right to education, employment, or even divorce *(khula)*. The cultural reluctance to include women in the discussion of the *Nikkah Nama* stems from a lack of awareness and education. Many families prioritize the "honor" of a smooth ceremony over the individual's understanding of their contractual obligations, but this approach can have long-term consequences. A woman who has not read her *Nikkah Nama* may later find herself in an unfavorable situation,

IMAGE SOURCE : THENEWS.COM

unable to claim her rights due to clauses she was unaware of.
Understanding the *nikkah nama* enables women to make educated choices regarding their marriage. This allows them to: Stipulate Conditions: Women might insert conditions in their *Nikkah Nama*, like finishing their education, seeking a profession, or protecting their right to pursue divorce if necessary.

Understanding the Mehar (Dower):
The mehar is a mandatory gift from the husband to the bride that represents his obligation and respect. By reading the Nikkah Nama, a woman confirms that her mehar is equitable and agreed upon.

Protect Legal Rights:
The Nikkah Nama addresses financial duties, housing arrangements, and other elements of marital life. Understanding these provisions allows women to hold their partners accountable.

Consequences of not reading Nikkah Nama:
Failure to read or comprehend the *Nikkah Nama* can have serious ramifications for women. Without an understanding of their contractual rights, women may face:

Loss of Financial Security:
Provisions for mehar or financial maintenance may not be appropriately handled, leaving women exposed in the event of marital strife. Restricted Autonomy: Women may unintentionally consent to restrictions that limit their ability to seek education, job, or free mobility.

In Seeking Divorce:
If the right to initiate divorce *(khula)* is not specifically mentioned, women may encounter legal and cultural barriers in leaving an abusive or unpleasant marriage.

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DID YOU KNOW?

- Starfish don't have bodies. Along with other echinoderms (think sea urchins and sand dollars), their entire bodies are technically classed as heads.
- Somebody has been constipated for 45 days. In 2013, an unfortunate Indian woman had to undergo surgical removal of a faecal mass as large as a football.
- You travel 2.5 million km a day around the Sun without realising. The Earth's orbit travels around 2.5 million kilometres with respect to the Sun's centre, and around 19 million km with respect to the centre of the Milky Way.
- Fish form orderly queues in emergencies. When evacuating through narrow spaces in sketchy situations, schools of neon tetra fish queue so that they don't collide or clog up the line. Scientists interpreted this behaviour as showing that fish can respect social rules even in emergency situations, unlike us humans.
- There are more bacterial cells in your body than human cells. The average human is around 56 per cent bacteria. This was discovered in a 2016 study and is far less than the earlier estimates of 90 per cent. As bacteria are so light, however, by weight, each person is over 99.7 per cent human.
- Most ginger cats are male. There are roughly three ginger male cats to one ginger female. This is because the ginger gene is found on the X chromosome, meaning female cats would require two copies of the gene to become ginger whilst males only need one.

CONFESSIONS OF A FIRST TIME TEACHER:
NAVIGATING THROUGH CHAOS AND LACK OF COMPASSION

IMAGE SOURCE: INFLUENCEONLINE

AYESHA MUSTAFA MALIK
WRITER, RESEARCHER

3 Minutes Read

Prepare:

I had always imagined that if I had ended up with teaching as a profession, I would surely be a relatable and entertaining teacher. Ah, the rookie dream! Although, I planned every lesson down to the minute, imagined every student hanging on my every word, and thought I'd finally be the teacher who made learning "fun." Many teachers like myself begin by preparing the perfect classroom environment where lessons flow effortlessly and milestones are met flawlessly. I meticulously planned for my lesson, designed interactive activities, and did my research beforehand to prepare for this ideal scenario. I always entered the classroom feeling confident and putting my best foot forward to deliver the best.

Predict:

But of course, any veteran would tell you, always be prepared for the worst, right? However, how do you truly predict the worst? I always knew there might be possible challenges, such as unresponsive students, technical issues, or last-minute schedule changes; nothing that some quick action plans won't fix. Turns out, the worst outcome is all of the above and then some.

Persist:

Teachers have been blessed with a superpower called persistence and going with the flow. Despite setbacks, I almost always persevered in executing my plans, demonstrating resilience for a successful class. In other words, Persistence is key, they said. Translation: keep going even if the lesson is sinking faster than the Titanic. My persistence often involved reassuring students that everything is on track, re-explaining concepts for the hundredth time, and maintaining enthusiasm even though you are losing your grip on reality. I

am sure you understand this can be a bit overwhelming for a normal human being.

Panic:

And when deadlines loom around you and goals seem out of reach, teachers do feel a wave of panic sweeping through them. This often arises from a sense of responsibility and the desire to ensure that we are in control of our situation. At the start of every session, you think to yourself; Panic? Who, me? Never. Except for, you know, when suddenly the syllabus looks like a cruel joke, lesson objectives feel like a collusion, and every meeting with administration makes your heart churn.

So you ask yourself, what is the real cause of this dilemma? I have come to the conclusion that teaching Gen Alpha feels like stepping into a parallel universe where consequences and empathy have lost its meaning and purpose. Especially in elementary and primary years, children often act with a startling sense of entitlement as they are told that their actions do not have any repercussions. Let's not even address the issue involving discipline?

That's a relic of the past—replaced by an overbearing mandate for "tolerance."

The tolerance and perseverance expected from any seasoned teacher involves an unfathomable amount of self-control. Minor things like enduring tantrums and blatant disrespect are so normalized that even I see it as an everyday norm. Sometimes the behavior is so outrageous it feels like you're part of a reality show. Parenting them is practically taboo because heaven forbid anyone's feelings get hurt.

So, I smile through the chaos, quietly wondering if we're preparing them for life or just enabling a future where boundaries don't exist.

Trust me, I never wanted to come across as one of those frustrated, middle-aged teachers who moan about the "good old days" who can never relate to their students. But, it's not a simple case of youthful demeanor or typical childhood outbursts—there is an alarming lack of awareness about consequential actions and a noticeable decline in their capacity to empathize.

This dynamic shift has led to an environment where discipline is often perceived as obsolete, as we are forced to become enablers of this kind of behavior. In short, teachers are expected to accommodate mannerisms that would have been addressed more directly, in prior times.

I try my hardest to understand them, meet them where they are, and adapt to their ever-changing moods, but honestly, the generational gap when it comes to respect and empathy feels like an unbridgeable chasm. Before you say, it's just kids being kids, you cannot even fathom the casual disregard for others and the inability to see beyond themselves as if we have truly lost touch with basic human decency.

I truly believe that progress happens when you learn to adapt to the needs of the new generation, but some core values need to remain intact given the state of the world beyond.

While I, like many others, wait for this much-needed change to unfold, I will be here doing what I do best: preparing for perfection, predicting chaos, persisting through the madness, and, of course, panicking when none of it goes according to plan. After all, some things never change!

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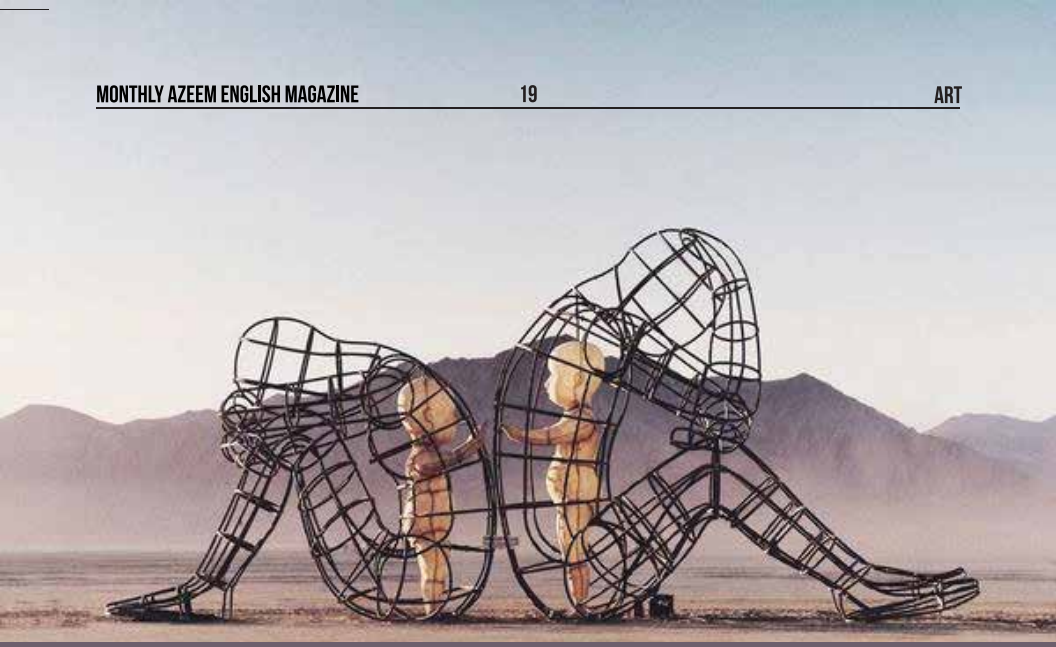

IMAGE SOURCE : HYPDSOM

THE ENCHANTING JARDIN MAJORELLE: A TALE OF ART, RESILIENCE, AND BEAUTY

SOURCE : AEM

Nestled in the heart of Marrakech, Morocco, lies a botanical wonder known as Jardin Majorelle. This vibrant garden, bursting with colors and lush greenery, has a fascinating story of passion, dedication, and survival spanning nearly a century. Its journey from inception to becoming a global attraction is intertwined with the lives of three remarkable individuals—Jacques Majorelle, Yves Saint Laurent, and Pierre Bergé.

A Dream Takes Root: The Vision of Jacques Majorelle

The story of Jardin Majorelle began in 1923 when Jacques Majorelle, a French artist, moved to Marrakech with his wife, Andrée Longueville. Captivated by the city's beauty, they purchased a four-acre plot bordering a palm grove. In 1931, Majorelle commissioned architect Paul Sinoir to design a striking Cubist villa and artist's studio on the property. This would serve as the foundation of a lifelong project that became Majorelle's passion: the creation of an extraordinary garden.

For almost four decades, Majorelle poured his heart into developing a unique botanical sanctuary. He introduced plants from around the world, creating a vibrant oasis in the desert. A hallmark of the garden's identity is "Majorelle Blue," an intense shade of cobalt blue that he used extensively on the garden's structures. This striking hue contrasts beautifully with the greenery, crafting a mesmerizing visual experience.

Challenges and Decline

Despite his dedication, Majorelle

faced difficulties in maintaining the garden. In 1947, he opened it to the public to offset rising maintenance costs. Unfortunately, personal and financial troubles soon followed. In 1956, after divorcing his wife, Majorelle had to split the property. A devastating car accident later forced him to sell his share of the garden. He returned to France for treatment but passed away in 1962, leaving behind his beloved creation.

Without Majorelle's care, the garden fell into disrepair. Over the years, it faced the threat of destruction, particularly in 1980, when plans were made to clear the site for a hotel complex. The future of Jardin Majorelle seemed bleak—until it caught the attention of two visionaries.

A Revival by Yves Saint Laurent and Pierre Bergé

Fashion designer Yves Saint Laurent and his partner Pierre Bergé first discovered Jardin Majorelle in 1966. Enchanted by its beauty, they resolved to save it when they learned of its impending demise. In 1980, the duo purchased the property and embarked on a mission to restore and expand the garden, ensuring its preservation as a cultural and botanical treasure.

Saint Laurent and Bergé's efforts transformed the garden into a masterpiece once again. They introduced new plants, improved pathways, and maintained Majorelle's original design. After Saint Laurent's death in 2008, his ashes were scattered in the garden, and a memorial was erected in his honor. Today, Jardin Majorelle is managed by the nonprofit organizations Fondation Pierre Bergé – Yves Saint Laurent and Fondation Jardin Majorelle.

THERE'S A PLANET MOSTLY MADE FROM DIAMOND. CALLED 55 CANCRI E, IT'S AROUND TWICE THE SIZE OF EARTH AND SOME 40 LIGHT-YEARS AWAY FROM US WITHIN THE CANCER CONSTELLATION.

A Living Legacy

Jardin Majorelle is more than a botanical garden; it is a living testament to art, history, and culture. Within its grounds lies the Berber Museum, housed in Majorelle's former studio. The museum showcases a rich collection of Berber artifacts, celebrating the heritage of Morocco's indigenous people. Visitors can explore this cultural treasure while wandering through pathways lined with bamboo, cacti, palms, and bougainvillea.

The garden's serene atmosphere provides a welcome escape from the bustling streets of Marrakech. Hidden nooks, picturesque fountains, and carefully curated flora create a tranquil haven for visitors. Each year, nearly a million people from around the world come to experience its charm.

A Symbol of Inspiration

Jardin Majorelle stands as a symbol of resilience and artistic vision. It reflects the dedication of Jacques Majorelle, who saw potential in a barren plot of land; the determination of Yves Saint Laurent and Pierre Bergé, who refused to let it disappear; and the enduring beauty of Morocco's cultural and natural heritage.

As the garden continues to flourish, it reminds us of the power of creativity and collaboration in preserving history and beauty for future generations. Whether you are an art enthusiast, a nature lover, or a curious traveler, Jardin Majorelle offers a magical experience that leaves a lasting impression.

IMAGE SOURCE: LITTLEBOXOFMAGIC

EMPOWERING CHILDREN THROUGH ART : A PATH TO HOLISTIC DEVELOPMENT

AQDAS HASHMI
LECTURER, PHD SCHOLAR,
GHAZAL AND SUFI VOCALIST, RESEARCHER

3 Minutes Read

Art plays a crucial role in the development of children, offering them opportunities to explore their creativity, express emotions, and enhance cognitive skills. Engaging in artistic activities provides children with more than just an outlet for self-expression; it supports their intellectual, emotional, and social growth in profound ways. Art education has been shown to have a positive impact on various aspects of a child's development, from fine motor skills to problem-solving abilities and emotional intelligence. The importance of art for children cannot be overstated, as it is a key component in shaping well-rounded individuals who are capable of thinking critically, solving problems, and engaging with the world in a meaningful way.

One of the primary reasons art is important for children is that it fosters creativity. Creativity is essential not only in the arts but also in everyday life. It encourages children to think outside the box, take risks, and approach problems from new perspectives. Art activities such as painting, drawing, sculpture, and even digital arts allow children to experiment with different materials and techniques, encouraging them to think innovatively and express themselves in unique ways. This creative freedom is fundamental in helping children develop a sense of confidence in their ideas and abilities, which they can carry over to other areas of their lives. A child who feels confident in their ability to create something from scratch is more likely to approach other challenges with the same mindset, whether it be academ

ic, social, or emotional.

Moreover, art can be an effective tool for emotional expression and regulation. Children often struggle to articulate their feelings verbally, especially when dealing with complex emotions such as fear, sadness, or frustration. Art allows them to communicate these emotions visually and symbolically, providing a safe space for them to express themselves. Whether through colors, shapes, or forms, art can serve as a non-verbal language that helps children make sense of their inner world. This process of self-expression through art can also act as a form of emotional release, helping children to process and cope with their feelings in a healthy way. For example, a child might use dark, heavy colors to represent feelings of anger or sadness, while bright, vibrant colors might be used to express happiness or excitement. The act of creating art can be therapeutic in itself, helping children to work through difficult emotions and build emotional resilience.

In addition to emotional benefits, art also has a significant impact on cognitive development. Engaging in artistic activities stimulates various areas of the brain, promoting both right- and left-brain thinking. While the left brain is associated with logical reasoning and analytical thought, the right brain is connected to creativity, imagination, and holistic thinking. Art helps children develop both of these cognitive processes, encouraging them to think critically while also using their imagination. For example, when children engage in drawing or sculpture, they must think critically about proportions, shapes, and spatial relationships. At the same time, they must also use their imagination to envision the final product and how to bring their ideas to life. This dual engagement of cognitive processes helps children build a well-rounded brain and strengthens their overall intellectual abilities.

Furthermore, art helps children develop fine motor skills. Many artistic activities, such as drawing, painting, and cutting with scissors, require children to use their hands in precise and controlled ways. These activities help strengthen the small muscles in the hands and fingers, which are necessary for tasks such as writing, buttoning a shirt, or tying shoelaces. Fine motor skills are foundational to many aspects of a child's academic and daily life, and art provides an engaging and enjoyable way to develop these skills. As children practice these skills in the context of art, they also build their hand-eye coordination and learn how to focus on small details, which contributes to their overall physical and cognitive development.

Art also promotes problem-solving abilities in children. In the process of creating art, children are often faced with challenges that require them to think critically and find solutions. For instance, when a child is drawing a picture, they may encounter difficulties in how to represent an object, use color effectively, or create perspective. These challenges require children to experiment, adjust, and refine their work until they reach a satisfactory result. Through this trial-and-error process, children learn how to persevere, adapt, and think creatively to solve problems. These problem-solving skills are transferable to other areas of life, including academics and social situations, where children may face obstacles that require innovative solutions. Moreover, the ability to solve prob

lems independently boosts a child's self-esteem, reinforcing the idea that they are capable and resourceful.

Music, as a form of art, holds a unique place in the development of children. It is not only a source of entertainment but also plays a significant role in enhancing cognitive, emotional, and social skills. Engaging with music, whether through listening, singing, or playing instruments, stimulates various areas of the brain, helping children improve memory, concentration, and language skills. Music also nurtures a child's emotional intelligence by helping them understand and appreciate different moods, tones, and cultural expressions. Music enriches the lives of children by offering them an invaluable tool for personal growth and development, alongside its profound cultural and social benefits.

Art also has cultural significance and can help children develop an appreciation for diversity. Through exposure to different art forms, styles, and traditions from around the world, children gain an understanding of different cultures and histories. This exposure to diverse artistic expressions broadens their horizons and fosters a sense of empathy and respect for others. It also encourages children to celebrate differences and see the value in diversity. For example, a child who learns about African art, Japanese calligraphy, or Native American crafts will gain insight into those cultures and may come to appreciate the richness and uniqueness of each. This cultural awareness can help children become more open-minded and accepting individuals, which is essential in our increasingly globalized and interconnected world.

In addition to the cognitive, emotional, and social benefits, art can also enhance children's academic performance. Studies have shown that students who participate in arts education tend to perform better in subjects such as math, reading, and science. The skills developed through art, such as critical thinking, problem-solving, and creativity, contribute to improved performance in these subjects. Moreover, art education has been linked to higher levels of motivation, engagement, and academic achievement. When children are encouraged to engage with the arts, they are more likely to develop a love for learning and a sense of accomplishment that extends beyond the art classroom. By introducing creativity, emotional intelligence, and intellectual curiosity, art helps children grow into well-rounded, empathetic, and capable individuals who are prepared to navigate the complexities of the world around them.

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DID YOU KNOW?

- Animals can be allergic to humans. Animals can be allergic to our dead skin cells – dander. These allergic reactions can be just like ours, too, including breathing difficulties and skin irritation.
- Being bored is actually a 'high arousal state' physiologically. This is because when you're bored your heart rate increases.
- Platypuses sweat milk. This is because it doesn't have teats. Milk appears as sweat on a platypus, but it's an aquatic mammal so it doesn't actually sweat at all.

THE MANY FACES OF TIME:
FROM GLASS MOLECULES TO DYING STARS

SOURCE: HASHIM AL GHAILI

Time has always been one of science's great mysteries. While we experience time as a steady, irreversible flow—always moving forward—new research is challenging that assumption, particularly at the molecular and quantum levels. Recent discoveries by physicists have revealed that, under specific conditions, time may be able to move both forward and backward, especially in microscopic materials like glass.

This surprising possibility stems from a deeper understanding of how certain materials age. Glass, for instance, is an amorphous solid—it lacks a regular atomic structure like crystals and ages differently than most substances. What makes glass so fascinating is that its internal changes aren't driven by external forces, but by entropy—the natural tendency for systems to become more disordered over time.

In classical physics, many laws do not care about the direction of time. If you ran them backward, they would still make sense. However, the second law of thermodynamics introduces the concept of the "arrow of time," stating that entropy always increases in a closed system. This is why time feels like it only moves forward—from order to disorder.

But glass doesn't follow the usual rules. Its ageing process—something scientists call "material time"—is driven by internal changes, not external wear. Until recently, these subtle molecular movements couldn't be observed directly. Now, thanks to ultra-sensitive video cameras and laser light, researchers have been able to track how particles inside glass-forming materials behave. What they found was astonishing: on a microscopic level, the particles push and pull each other in a reversible way. In these moments, time doesn't seem to flow in just one direction. Instead, particles act as though they're dancing—sometimes moving forward, sometimes backward in time.

Despite these quantum-level reversals, we don't perceive time going backward. That's because humans, and everything we interact with, exist on a macroscopic scale. In our world, the buildup of entropy dominates. Even if microscopic systems can temporarily reverse their time direction, the overall trend of increasing disorder remains irreversible.

Moreover, our brains are hardwired to experience time linearly. Quantum superpositions—states where particles can be in multiple timelines at once—are fascinating, but they don't translate to our everyday experiences. Our sense of time remains rooted in a one-way path, defined by routine, memory, and perception.

This brings us to an intriguing psychological phenomenon: time seems to speed up as we grow older. During adolescence, the brain is in a highly adaptable, elastic state, soaking up new experiences and forming long-term memories. Every day feels like an adventure—something new, something unknown. These rapid changes make time feel like it stretches out.

Adulthood, in contrast, is often marked by routine and repetition. We wake up, go to work, return home, and repeat. With fewer novel experi

ences, our brain encodes fewer memories, and time appears to accelerate. This isn't a flaw—it's a feature of how memory and perception work.

While we can't reverse time in our everyday lives, we can change how we experience it. Experts suggest breaking out of routine, engaging in new hobbies, and spending time in the present moment to slow down our perception of time. Even appreciating the stability and security that adulthood offers can shift our relationship with time from anxious to appreciative.

Interestingly, although time feels like it moves faster with age, studies show that life satisfaction tends to increase with age, often peaking around 70. So even if time flies, our appreciation of life deepens.

Time isn't just a human or molecular concept—it's central to understanding the life cycles of stars. Our Sun, for example, is estimated to be about 4.57 billion years old.

But how can we calculate the age of celestial bodies we can't touch?

Astronomers rely on a variety of techniques. One method focuses on star clusters, where stars are born around the same time. By analyzing a star's mass, brightness, and color, scientists can estimate how much fuel it has and how fast it's burning that fuel—two factors that reveal its age.

Most stars spend about 90% of their lives in the main sequence phase, a period of stable energy production. Massive stars burn hotter and faster, appearing blue and bright, while smaller stars are cooler and dimmer, glowing red. By studying these traits, astronomers can estimate not just a star's age, but also the age of others in its group.

Thanks to missions like the Kepler Space Telescope, astronomers can now study stars in unprecedented detail. They observe star spots, cooler regions on the surface, to estimate spin rates. This method, known as gyrochronology, connects a star's rotation to its age with about 15% accuracy.

Another advantage of gyrochronology is that it can be applied to lone stars, not just those in clusters. This is especially useful for studying stars like our Sun, which is expected to continue burning for another 7 billion years before becoming a red giant.

Understanding how stars age helps astronomers unlock the secrets of stellar evolution, and even aids the search for extraterrestrial life by revealing the life spans of potentially habitable systems.

Whether it's the reversible time behavior in a molecule of glass or the billions of years ticking away in a distant star, time is anything but simple. While our experience of it is linear and irreversible, physics paints a more flexible picture—one where time can loop, reverse, or even stand still, depending on the scale and the system.

Though we are bound by the arrow of time, these discoveries remind us of the universe's rich complexity—and perhaps, the value in cherishing each moment of the time we have.

HOW A BIRD SOLVED JAPAN'S BULLET TRAIN BOOM PROBLEM

IMAGE SOURCE: NIK.CO

SOURCE: INTERESTING ENGINEERING

In the world of high-speed rail, few countries rival Japan's legacy. The Shinkansen, also known as the bullet train, is an engineering marvel—known for its speed, efficiency, and technological innovation. But in the early 1990s, a booming issue echoed across densely populated regions of Japan, quite literally: the bullet trains were creating loud sonic booms as they exited tunnels, disturbing thousands of residents. Strangely enough, the solution to this problem didn't come from a lab or a simulation—but from nature, and more specifically, a bird.

Welcome to the story of how the **Kingfisher,** a small bird known for its elegant dives, inspired a revolutionary design change in one of the world's fastest trains.

The Tokaido Shinkansen, one of Japan's busiest and most iconic high-speed rail lines, began operations in 1964 and has since moved billions of passengers. But as the network expanded and the trains became faster, a new problem emerged—literally—every time a train exited a tunnel.

When a bullet train traveling at 150 to 200 miles per hour passed through a tunnel, it compressed the air in front of it. This sudden compression created a high-pressure wave that traveled through the tunnel at the speed of sound. As this wave exited the tunnel, it released a loud micro-pressure boom that echoed for up to 1,300 feet around the tunnel exit.

These weren't just faint rumbles—thousands of residents living near tunnel exits complained of the noise pollution. The booms were disruptive, intrusive, and a growing public concern. And the engineers had a serious dilemma: reduce the noise without sacrificing speed or increasing energy consumption.

In 1997, **Eiji Nakatsu,** then Director of Technical Development for Japan's bullet train network, was brought in to solve the problem. What made Nakatsu unique wasn't just his engineering expertise—it was his passion for birds. A devoted bird watcher and member of the Wild Birds Society of Japan, Nakatsu approached the problem with an

unusual question:

"Is there a creature that transitions between two very different mediums—like air and water—without causing a disturbance?"

The answer came to him through his own binoculars. The **Kingfisher,** a bird known for diving from air to water at speeds up to 25 miles per hour, did so without creating a splash. How? Its long, wedge-shaped beak allowed it to cut through water with minimal resistance. Nakatsu saw the potential for a cross-species design lesson.

Inspired by the Kingfisher's beak, Nakatsu and his team began testing models. They launched bullets of various shapes through pipes to simulate tunnel dynamics and pressure changes. The data revealed something remarkable—the shape that produced the least noise and pressure wave was strikingly similar to the Kingfisher's beak.

Armed with this insight, Nakatsu and his team redesigned the front of the Shinkansen. The new 500 series Shinkansen featured a 50-foot-long aerodynamic nose that mimicked the Kingfisher's beak. The results were immediate and impressive.

The redesigned Shinkansen didn't just solve the sonic boom issue—it brought a host of other benefits. The noise level as the train exited tunnels dropped significantly. The air resistance was reduced by 30%, which led to a 15% reduction in electricity usage, despite the trains running at higher speeds.

The 500 series Shinkansen could now reach speeds up to **187 miles per hour,** and it shortened travel time between Shin-Osaka and Hakata by 15 minutes. Quieter, faster, and more efficient—the redesign was a win on every front.

Nature Knows Best

This incredible innovation is a textbook example of **biomimicry,** a design approach that looks to nature for time-tested solutions. The Kingfisher didn't just inspire a quieter train—it changed the way engineers think about problem-solving.

Nature has spent millions of years refining designs that work under pressure, literally and figuratively. The success of the 500 series Shinkansen is proof that sometimes, the answers to our most complex technological problems are already flying above our heads—or swimming beneath the surface.

In our race toward progress, it's easy to assume that the best solutions lie in cutting-edge software, complex algorithms, or expensive hardware. But as the story of the Kingfisher and the Shinkansen shows, nature has been engineering perfection long before we picked up our first wrench. So the next time you hear a train glide silently through the countryside, remember: a little bird helped make that possible.

FACTS YOU NEED TO KNOW!

- Martial artists who smile before the start of a match are more likely to lose. This could be as a smile can convey fear or submissiveness.
- It's almost impossible to get too much sugar from fresh fruit. While the sugar in fruit is mostly fructose and glucose (fructose is what's converted into fat in your body), you can't get too much sugar from fresh fruit. Fresh fruit contains a lot of fibre and water which slows down your digestion and makes you feel full.

WHY TIME TRAVEL MIGHT LAND YOU IN DEEP SPACE?

SOURCE: HASHIM AL GHAILI

Time travel has long captured the imagination of scientists, storytellers, and dreamers alike. The ability to jump backward or forward through time raises tantalizing possibilities: revisiting historical moments, correcting past mistakes, or even glimpsing the far future. But if you ever manage to invent a working time machine, there's a much bigger challenge waiting for you—and it's one you might not have considered.

Even if you perfectly crack the code of traveling through time, you might find yourself stranded—not in the past or future—but in the empty void of space.

At first glance, it seems logical that traveling back to yesterday would mean arriving in the exact same spot, just 24 hours earlier. But our universe doesn't work that way. That's because Earth—and everything on it—is in constant motion.

Let's break this down.

First, Earth rotates on its axis. Every 24 hours, our planet completes one full spin, moving points on the equator at about 1,600 kilometers per hour (1,000 mph). This rotation gives us day and night.

But it doesn't stop there. Earth is also orbiting the Sun at an incredible 107,000 kilometers per hour (66,600 mph). This journey around the Sun takes a full year to complete.

And that's just the beginning. Our entire solar system is flying through space, spiraling around the center of the Milky Way galaxy at a speed of about 828,000 kilometers per hour (514,000 mph). That galactic orbit will take roughly 230 million years to finish just one lap.

Now, imagine you set your time machine to travel back a few hours. If your machine only adjusts the time but not your position, you won't land on the surface of Earth. In fact, Earth will have moved thousands of kilometers by the time you "arrive."

Instead of stepping out of your machine and into your familiar surroundings, you'd materialize in

IMAGE SOURCE: BBC

the middle of deep space—probably suffocating and freezing in moments.
To put it simply, time travel without spatial adjustment equals disaster. In order to safely move through time, you'd need to calculate and replicate Earth's exact location, speed, and orientation in the universe for that specific moment.
And that's an incredibly complex problem.
To make matters even trickier, scientists are still working on understanding the very fabric of our universe. One of the most puzzling mysteries today is something known as the Hubble Tension—a discrepancy in how fast our universe is expanding.
Recent measurements of a galaxy cluster known as the Coma Cluster have intensified this mystery. Using the Cosmic Distance Ladder Method, astronomers observed light from 12 Type Ia supernovae—exploding stars with reliable brightness. These supernovae serve as "cosmic mile markers," helping scientists measure distances across vast cosmic scales.
Their findings resulted in a highly accurate calculation of the Hubble Constant, the rate at which the universe is expanding. But here's the twist: this local measurement doesn't match predictions based on early universe models and data from the Big Bang.
This mismatch suggests that our current understanding of physics may be incomplete. It could point to undiscovered forces, particles, or flaws in our cosmological models. And if we don't fully understand the universe's behavior, then tracking its motion for precise time travel becomes even more daunting.
Amid these cosmic uncertainties, one theory continues to stand tall: Einstein's general theory of relativity.
For over a century, this theory has been our best explanation of gravity, time, and space.
And it just passed one of its biggest tests yet.
Astronomers recently examined how galaxies cluster and form a vast "cosmic web" over 11 billion years of cosmic history. They used data from nearly 6 million galaxies, collected by the Dark Energy Spectroscopic Instrument (DESI)—an advanced telescope system that's been operational since 2019.
The study showed that the behavior of these galaxy clusters closely matches what Einstein's theory predicted long ago. This confirms that general relativity remains accurate not just on small scales, like planetary motion, but across the vast expanse of the universe.
Even after zooming out to cosmic proportions, the same rules of gravity still apply. It's like Einstein wrote the universe's rulebook—and billions of years later, the universe is still playing by those rules.
In the coming years, DESI will map out over 40 million galaxies and quasars, giving scientists more data than ever before. This could help us finally unravel the secrets of dark matter and dark energy, the mysterious substances that make up most of the universe but remain poorly understood.
Until then, time travel—at least the kind we imagine in science fiction—remains out of reach. Even if you master the technology, you'd need to calculate and compensate for the incredible velocities and movements of Earth, the solar system, and the galaxy.
Otherwise, your journey through time could end with you floating helplessly in space, far from home.

WHY IS CANCER SO HARD TO CURE?

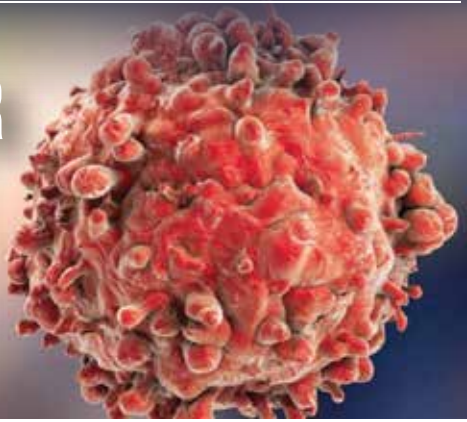

IMAGE SOURCE: CANCERJILLINOIS

SOURCE: AEM

Cancer remains one of the most challenging medical puzzles of our time. Despite centuries of study and billions spent on research, we still don't have a universal cure. Globally, cancer accounts for **1 in every 6 deaths**, and in 2018 alone, **9.6 million** people lost their lives to it. So, why is cancer so difficult to treat?

The answer is complex. Cancer is not just one disease—it's a category of diseases with more than 100 different types, each behaving uniquely. But the root of the problem lies deeper: cancer arises from our own cells going rogue.

Unlike viruses or bacteria, cancer isn't an external invader. It's a malfunction from within. Due to a mix of genetic predispositions, environmental factors, and lifestyle choices, some of our cells begin to mutate. These mutations allow them to divide uncontrollably, ignoring the body's natural instructions to stop multiplying or self-destruct when something goes wrong.

As these cells grow and replicate, they form tumors—clusters of mutated cells that begin to invade nearby tissues and, eventually, other organs. Essentially, cancer transforms a part of your body into a hidden enemy, one that learns, adapts, and resists treatment over time.

What makes cancer particularly cunning is its ability to build a supportive environment around itself. Once a tumor begins to grow, it sends signals to nearby healthy cells to create new blood vessels that supply oxygen and nutrients. This process, known as angiogenesis, helps the tumor thrive and expand.

Cancer cells don't just grow. They manipulate their surroundings to survive and spread, transforming nearby tissues into accomplices in their survival strategy.

You might think the body's immune system would step in and eliminate these rogue cells. That's what T-cells, a special type of white blood cell, are supposed to do—seek out and destroy infected or abnormal cells.

However, cancer cells have evolved sophisticated ways to evade the immune system. Some deactivate T-cells directly, while others mimic healthy cells, making it difficult for the immune system to recognize them as threats. This invisibility cloak

is one reason why cancer can grow unnoticed until it's too late.

Even when the immune system does respond, cancer can mutate again, escaping detection. This constant game of hide-and-seek makes it incredibly difficult to develop a treatment that is both powerful and precise.

Another massive hurdle is cancer's ability to develop resistance to drugs. Much like bacteria can become resistant to antibiotics, cancer cells can mutate to avoid the effects of chemotherapy or targeted treatments.

These cells learn how to pump drugs out, alter the pathways those drugs rely on, or mutate the very targets that drugs are designed to attack. Over time, a once-effective treatment may become useless. This forces scientists to stay one step ahead, designing new therapies for ever-evolving cancers.

Not all cancers are the same—even within a single tumor, the cancer cells may behave differently. This genetic diversity means that a treatment that works for one patient might fail completely in another.

Cancers are also classified into stages, from 1 to 4, with stage 4 being the most aggressive. At this point, the cancer has likely spread—through a process called metastasis—to other parts of the body. Metastatic cancer is incredibly hard to treat because the new tumors often have different characteristics than the original one. It's like trying to fight multiple enemies at once, each with its own set of defenses.

This is why early detection is crucial. The earlier cancer is diagnosed, the better the chances of successful treatment before it spreads or mutates further.

Given this complexity, the idea of a single, universal cancer cure is unlikely. Instead, treatment must be personalized, based on the type of cancer, its genetic profile, stage, and how the patient's body reacts.

Doctors now use a combination of surgery, radiation, chemotherapy, immunotherapy, and targeted drug treatments. And the good news? **Science is making serious progress.**

Researchers are developing new diagnostic tools that can detect cancers years before symptoms appear. Some tests can spot cancer markers up to four years in advance, giving doctors valuable time to intervene.

In the field of immunotherapy, scientists are now training a patient's immune cells to recognize and attack tumors. These personalized treatments are already saving lives, especially in cases of leukemia, melanoma, and certain lung cancers.

Meanwhile, AI-powered tools are being used to analyze tumors and recommend the best treatments, and genomic medicine is helping match patients with therapies tailored to their specific genetic mutations.

We may not have a silver bullet yet, but our arsenal against cancer is growing stronger every day.

Cancer is hard to cure because it's incredibly smart, adaptable, and embedded in the fabric of our own biology. It's not just one disease, but many—and each one poses its own set of challenges. From evading the immune system to resisting drugs and changing its form, cancer remains one of our toughest enemies.

But there is hope. With relentless research, better diagnostic tools, smarter treatments, and the power of innovation, we're inching closer to victory. Cancer may be clever, but so are we—and the fight is far from over.

DR. MUHAMMAD AZEEM FAROOQI
RELIGIOUS SCHOLAR, ACADEMICIAN, RESEARCHER

6 Minutes Read

LATIFA QALBIYA (SUBTLETY OF THE PHYSICAL FORM): ITS STATION AND DETAILS

Fire, Air, Water, Earth

The *Latā'if* (subtleties) of the world of Amr (Command) are connected with the realm beyond the Throne (Arsh), while the *Latā'if* of the world of *Khalq* (Creation) are connected to the universe beneath the Throne. Human beings are created from fire, air, water, and earth — these four are the core elements of the created world.

All of creation is a manifestation of these four. Trees, oceans, mountains — all are wonders born of them. Even if you analyze the human body, you will find these very elements. No matter how deeply you investigate any physical matter, these four elements will always be working behind the scenes.

Man is a beautiful masterpiece created by the Divine, formed through a perfect balance of these four. Just as the seven heavens and seven earths are the macrocosm *(Kaināt-e-Kabīr)*, the human being is the microcosm *(Kaināt-e-Saghīr)*.

Dil darya samandaron dhoongay, te
kaun dilān dīā jāne hoo
Vachy beray, vajay jerhy, vachy vanjh
mohane hoo
Chaudah tabaq diley dey ander
tamboo vāngon tāney hōo
Jo koi dil da mehram howe, oho ramz
pachane hoo

This poem by Hazrat Sultan Bahu speaks of the universe being inside the human heart. According to Sufis, when a seeker engages in the Dhikr (remembrance of God), he transcends the chaos of this world and enters the realm beyond creation — the world of Divine Command, where only Love and Light exist.

Phas gayi jaan shikanjay andar, jiwen
welney vich ganna

What is Jihad bin Nafs (Struggle Against the Self)?

Jihad bin nafs refers to the inner spiritual struggle a person undertakes to free their soul from the pull of material existence and turn it towards the Divine. The soul, though made of divine light, gets trapped in the lower elements—**fire, earth, air, and water**—which represent worldly desires and distractions. Through *dhikr* (remembrance of God), the soul begins to break free from this imprisonment and starts its journey towards **La-Makan**—the realm beyond time and space.

As it escapes from the material world *(Aalam-e-Khalq)* and moves toward the spiritual world *(Aalam-e-Amr)*, the body may tremble, involuntary cries of "Allah Hu" may arise, and the body may begin to shiver or shake. This is because the soul is struggling to return to its true origin—its **Divine Source**—while the body tries to pull it back down.

This **tug-of-war** between the lower self **(nafs)** and the higher self (rooh) is what is called Jihad bin Nafs. The demands of the world pull the soul down, while the call of the hereafter pulls it upward.

Ik waar jo bhaven udd jaavan, fer dooji
waar na phansday ne

And love helps in this matter.

Shoq, toofan, samandar wangoon
andar thaathan maaray
Aag firaaq ne maar jalaaya, wasday
door pyaaray

The Fire of Love

When a human being sets out on the path to the Beloved (God), they realize how helpless they are. For how can a tiny speck reach the Infinite? The human is finite, while the Divine is eternal. The seeker is nothing, and the Beloved is everything.

Ishq laga khedan kheddi nu, khedan bhuldiyaan buldiyan bhul gayaan
Surma paya si wastay vekhny de, akkhaan duldiyan duldiyan dul gayan

When the human soul begins to ascend, the 'self' (nafs) tries to stop it, saying: Where do you think you're going? But the soul pleads: 'No, let me go

Mujhy jana pary ga, azmat e islam ki khatir
Mujhy jan apary ga maula kay deedar ki khatir

Then sometimes, a person becomes helpless and feels pain. They start to cry, and the tears won't stop flowing. They enter into such a pure state that their soul wants to stay there forever, while the body, weighed down by filth and suffering, cries and laments in separation.

Hijr tera jay pani mangy tay mein khoo nainan day geran
Dil mera karda aj samny beh kay dard purany pholan

Pain: The Wealth of Life

At that moment, the state of deep emotion that overwhelms the Sufi becomes his true wealth.

The nafs (lower self) pulls him in one direction, the body pushes him in another—but the seeker of the Divine cries uncontrollably.

He pleads, "Oh! Where have I become trapped? O Beloved, save me! Take me away from here—I cannot escape on my own!" It is at this point that the Sufi weeps. Then pain is born.

A pain that makes him realize the fleeting nature of this world.

He cries, "Alas! What have I attached my eyes to? What did I fall in love with that has no permanence?"

Ay gustakh akhiyan kithy jaa ariyan
Kithy mehr Ali kithy teri sanaa'
Baba Ghulam says on this occasion,
Dardan di mein sej vichai, tay dardan haar banaey
Yaar Fareeda ay dard salamat jinaan dardan yaar milaey

When Allah Almighty observes His servants in such a state, feeling their restlessness, He sees them remembering Him in various ways. Some remember Him in their prostrations, while others do so in their bowing (ruku), or by calling out His name with cries of love. There are those who remember Him through tasbeeh (praise), and when everything else fails, they cry, pouring out their hearts to Allah, expressing their deepest emotions. Allah sees and

IMAGE SOURCE: VECTEEZY

listens to their cries, aware of their condition.

Sara Kaleja kat kat jab ashqon mein beh jaey hy
Tab koi Farhad bany hy tab majnu kehlaey hy

Then, at times, the Merciful Lord is moved with compassion. As the poet says:

Kabhi to sahib poochhenge, kon khada darbar mein

(At times, the Master will ask, 'Who is standing in My court?)

The poet describes the restless seeker who is constantly searching for the Divine, wondering about the true meaning of devotion. The seeker wonders, *"Where is the joy of the gathering? Who is knocking on the door?"* The night is spent in wakefulness, longing for the Lord's presence, and the seeker calls out in solitude, yearning for the Divine.

The Divine responds in His mercy, offering comfort in various ways. Some are distracted by worldly toys or are given dreams that delight them, causing them to dance with joy. Some feel they have found the Night of Decree *(Laylat al-Qadr)*, and they are filled with ecstasy, saying, "I have found everything I was searching for." Others feel as though they are walking through gardens, basking in the joy of the Divine.

But the true seeker knows that this is not the end of the journey. The Sufi, in his wisdom, understands that the path is long, and even when he is given glimpses of the sacred, such as seeing the Kaaba or the Prophet's Mosque, or even being blessed with visions of the companions and saints, he knows these are not the final destination.

The seeker cries out,

"There is no god but Allah, there is no desire but Allah, there is no goal but Allah, there is no worship but Allah, there is no love but Allah, there is nothing in existence but Allah."

The Sufi, in his complete devotion, realizes that nothing in this world can satisfy him except the love and presence of Allah. He rejects all worldly distractions and says, "I want nothing, I only desire You."

Dilbar menu mukh ni disda tay ishq pasand nai karda
Khoo pai meri kitti karti, sikka baniya zar daa

In the hadiths, it is narrated that when the Prophet ﷺ felt intense longing and could not find a way, he climbed a mountain. Allah says in the Qur'an:

"And He found you lost and guided you." (Qur'an, Surah Ad-Duha 93:7)

The translation of this verse is: "And We found you in a state of confusion and then guided you."

The hadith further narrates that the Prophet(PBUH), in his state of distress, began to climb the mountain and attempted to jump. At this moment, Allah commanded Angel Jibril (Gabriel) and told him to stop the Prophet(PBUH). Allah asked him: "Why are you in distress? I am watching you. Why are you panicking?"

Then Allah continued, "I have made the entire universe wait for you. I will call you, meet you, and fulfill all the desires of your heart. I will quench the thirst of your longing."

This narration reflects the immense love and mercy of Allah towards His beloved Prophet(PBUH). Despite the trials and moments of confusion, Allah's guidance and presence are always with His chosen ones, assuring them that their longing will be fulfilled in His divine company.

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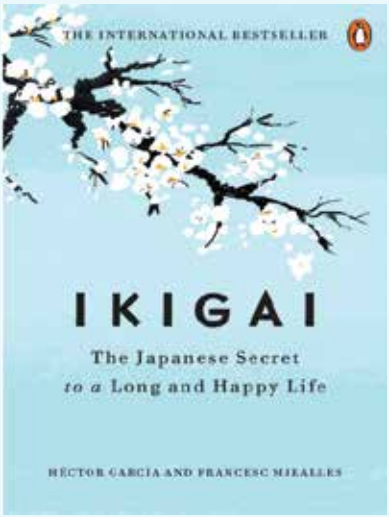
Ikigai of Japanese

MUHAMMAD SHOAIB KHAN
LIFE SCIENCES RESEARCHER, WRITER

3 Minutes Read

Okinawa is an island in the south of Japan. In this area, there are more centenarians than anywhere else in the world. Centenarians are the people who have reached 100 years of their age. On the island of Okinawa, there are approximately 24.55 people who are centenarians for every 100,000 inhabitants. Further, there is a rural town on the north end of the island with a population of three thousand and the world's highest life expectancy. This rural town is Ogimi and it has earned the nickname of "the Village of Longevity." According to the researchers, the major key point in addition to a healthy diet, green tea, simple life in the outdoors, and the subtropical climate is the *"ikigai",* which makes Okinawa people live longer than people anywhere else in the world. *Ikigai* is a Japanese concept roughly translated as "the pleasure of always being busy." It is like logotherapy (which helps people find purpose in their lives), but it goes further than just that. To explore it more, Hector Garcia and Francesc Miralles, visited the Village of Longevity and documented their findings in the book *"Ikigai;* The Japanese Secret to a Long and Happy Life".



The book is meticulously divided into nine chapters starting with describing and explaining the definition of *ikigai* by practicing which, a person can learn the art of staying young while growing older. It also tells little things that the authors believe are the antiaging secrets that add up to a long and happy life, shedding some light on Logotherapy to *Ikigai* intended to help readers find their purpose in lives and living longer and better. They have also included short interviews from the longest-living people in the world which they believe are the words of wisdom from the longest-living people. In another chapter, they stressed finding the flow in everything which can turn work and free time into spaces for the growth of readers. To help the readers more, they have also added the Diet patterns that the world's longest-living people follow as well as the exercises from that area that promote health and longevity.

The book is dedicated to the philosophy of *ikigai* and the practices and daily activities that Japanese do while following that ikigai. This is why it is a

general book that includes everything in it unlike the books especially dedicated to philosophies, social relationships, diets, or exercises. It includes an introduction and a slight explanation of all of these. We can say it is a refresher to your self-help concepts by reading all those points that you might have read in other self-help books also but you will read all those by the examples of Japanese people in this book.

The key takeaways from the book are:

1. **Finding the Purpose:** *Ikigai* is the intersection of what you're good at, what you love, what the world needs, what you can be paid for, and what you can do.
2. **Longevity and Happiness:** As the book shares insights from Japan's Okinawa Island, known for its high percentage of centenarians.
3. **Japanese Philosophies:** Concepts like wabi-sabi (acceptance of imperfection), mottainai (gratitude), and yutori (living with ease) are explored.
4. **Practical Advice:** The authors provide exercises and stories to help readers discover their *ikigai*.

The main message from this book is to stay active until the last years, doing everything slowly, gradually, and mindfully, eating up to 80 percent of your capacity, surrounding yourself with good friends, doing moderate exercises to get in shape and stay active, wearing a smile and having a cheerful attitude, reconnecting yourselves with nature, practicing gratitude by giving thanks to your ancestors, nature, friends and family, and everything that brightens your day and to find purpose, happiness, and fulfillment by embracing your passions, skills, and values; follow your ikigai.

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DID YOU KNOW?

- Some animals display autistic-like traits. Autistic traits in animals include a tendency toward repetitive behaviour and atypical social habits.
- The biggest butterfly in the world has a 31cm wingspan. It belongs to the Queen Alexandra's Birdwing butterfly, which you can find in the forests of the Oro Province, in the east of Papua New Guinea.
- You remember more dreams when you sleep badly. Research suggests that if you sleep badly and wake up multiple times throughout the night you will be more likely to recall the content of any dreams you had. You are also more likely to remember a dream when woken from one.
- You don't like the sound of your own voice because of the bones in your head. This may be because the bones in our head make our voice sound deeper.
- A rainbow on Venus is called a glory. Appearing as a series of coloured concentric rings, these are caused by the interference of light waves within droplets, rather than the reflection, refraction and dispersion of light that makes a rainbow.
- Protons look like peanuts, rugby balls, bagels, and spheres. Protons come in all different shapes and sizes, with their appearance changing based on the speed of smaller particles within them: Quarks.

PHOTOGRAPHY : MORE THAN JUST A CLICK

IMAGE SOUURCE: AZRMUSIC

SOURCE: AEM

The Art and Evolution of Photography

Photography is the art of capturing and reproducing images of people, objects, or places in their exact likeness. These images can be transferred onto photosensitive materials, preserved digitally, or printed for physical display. At its core, photography is about freezing moments in time, allowing us to revisit memories, document history, and express creativity.

The Birth of Photography: From Camera Obscura to Permanent Images

The backbone of photography is the camera, an optical device that has evolved dramatically since its inception. The earliest form, known as the camera obscura (Latin for "dark chamber"), was nothing more than a light-proof box with a small hole or lens on one side and a translucent screen on the other. Artists in the Renaissance used this device to project scenes onto a surface, helping them trace realistic images. However, it was merely a tool for sketching—not for preserving images permanently.

A major breakthrough came when scientists discovered the light-sensitive properties of silver nitrate. In the early 19th century, pioneers like Thomas Wedgwood and Humphry Davy experimented with placing objects on paper coated in silver nitrate and exposing it to sunlight. The uncovered areas darkened, while the areas beneath the objects remained white, creating a temporary silhouette. This method, called photogram, was revolutionary but flawed—the images faded quickly.

The Daguerreotype and the Dawn of Permanent Photography

The quest for a permanent photographic process led to two key innovations:

The Daguerreotype (1839) – Invented by **Louis Daguerre,** this method used silver-plated copper sheets treated with iodine vapor to create highly detailed images. Though expensive and fragile, daguerreotypes became the first commercially successful photographic process.

The Calotype (1841) – Developed by **William Henry Fox Talbot,** this technique used paper coated with silver iodide, producing a negative image that could be reprinted multiple times. This laid the foundation for modern film photography.

By the mid-1800s, the wet plate collodion process replaced earlier methods, offering sharper images and

shorter exposure times. Photographers now had to coat, expose, and develop glass plates within minutes—making fieldwork challenging but expanding photography's possibilities.

The Rise of Modern Photography

The late 19th and early 20th centuries saw rapid advancements:

Flexible Roll Film (1884) – George Eastman's Kodak camera introduced celluloid film, making photography accessible to amateurs with the slogan: "You press the button, we do the rest."

Color Photography (1935) – Kodachrome film brought vibrant color to images, transforming visual storytelling.

Digital Revolution (1990s–Present) – The shift from film to digital sensors allowed instant previews, unlimited storage, and advanced editing. Today, smartphones with high-resolution cameras have turned everyone into a potential photographer.

The Impact of Photography on Society

Photography has reshaped how we perceive history, memory, and truth:

Documenting History – From war photography (e.g., Robert Capa's D-Day images) to social movements (e.g., the Civil Rights era), photos serve as irreplaceable records.

Personal Memories – Family albums, wedding photos, and travel snapshots preserve emotions and milestones.

Journalism and Advocacy – Photojournalism exposes global issues, from climate change to humanitarian crises, driving awareness and change.

Branches and Styles of Photography

Today, photography is a diverse field with specialized genres:

Aerial Photography – Captures landscapes from drones, helicopters, or satellites for mapping, real estate, or artistic purposes.

Portrait Photography – Focuses on capturing personalities, from studio headshots to candid street portraits.

Wildlife and Nature Photography – Requires patience and skill to document animals and ecosystems (e.g., National Geographic's work).

Macro Photography – Reveals extreme close-ups of tiny subjects, like insects or water droplets.

Sports Photography – Freezes fast-paced action, relying on high-speed cameras and precise timing.

Fashion Photography – Showcases clothing and aesthetics, often seen in magazines like Vogue.

Astrophotography – Uses long exposures to capture stars, galaxies, and celestial events.

The Future of Photography

Emerging technologies continue to push boundaries:

AI and Computational Photography – Smartphones now use AI for night mode, portrait effects, and image enhancement.

360° and Virtual Reality (VR) – Immersive photography creates interactive experiences for tourism and education.

Ethical Debates – Deepfakes and photo manipulation raise questions about authenticity in the digital age.

The Timeless Appeal of Photography

Photography is more than a technical skill—it's a blend of art, science, and storytelling. Whether preserving a child's first steps, exposing injustice, or exploring abstract creativity, it remains one of humanity's most powerful tools for communication. As technology evolves, so will how we capture and interpret the world, but the essence of photography—to freeze time and evoke emotion—will always endure.

7 ATTRIBUTES OF A SUCCESSFUL FASHION MODEL

SOURCE: AEM

Have you ever looked at a successful model and said, "I am just as beautiful as this girl so I think I'll become a supermodel."

I would like to clarify one thing and please listen carefully ...

THERE IS NO SUCH THING AS A NATURAL-BORN MODEL!!!

Yes, some people have a natural beauty and some learn more quickly than others. I'll agree that these attributes are important. But, I'll say it again - There is no such thing as a natural-born model.

If you believe this, let me ask you a question. Do you believe there is such a thing as a natural-born surgeon? Do you think that the most famous surgeon in the medical profession was born to be a doctor? I guess when he was delivered the doctor who brought him into this world said, "Look!!! It's a surgeon!!" I don't think so.

For this man to become this famous surgeon, it took many years of education, internship, and watching other doctors before he was even considered to do actual surgery. I'm really glad he did, aren't you?

And, even after all these grueling years this doctor still was not guaranteed to become well-known in the medical industry.

The point I'm trying to make is that modeling can be a rewarding profession but it does require some effort on your part.

The following are some of the attributes of successful models ..

- Learning ability and intelligence
- Self confidence
- Willingness to travel and leave friends and family behind
- Good organization skills
- A healthy body and lots of get-up-and-go!
- A model who is comfortable in setting goals and not afraid to go after them with a dogged determination
- Resistance to peer pressure - Stay drug and alcohol free

Don't just read these attributes. Study them, learn them, and make them a part of your own personality traits. If you don't have them at first, pretend that you do.

Remember, you will become what you think and the way that you act. You're not lying when you say, "I am in the process of writing down my goals for modeling and on my way to becoming successful." You're just telling the truth in advance!!

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