Indian Knowledge Systems: Relevance of Ancient Practices for Contemporary Problems

A Compendium of Essays

Received for Essay Competition
Organized by

Indian Knowledge System Unit

Centre for Multi-disciplinary Development Research (CMDR)

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Compendium of Essays on the theme of Indian Knowledge Systems: Relevance of Ancient Practices for Contemporary Problems. These Essays have been submitted by the participants as part of the Essay Competition organized by CMDR under CMDRs Indian Knowledge System Unit

DISCLAIMER

A SPECIAL THANKS TO OUR TALENTED AUTHORS

CMDR extends sincere gratitude to all the authors for their insightful contributions to the Essay Competition. Your creativity, thought, and dedication made this publication possible, and we are delighted to share your perspectives with our readers. Thank you for enriching this competition with your unique write-ups.

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C O N T E N T S

Message

It is with great pleasure that CMDR presents this Compendium of Essays on Indian Knowledge Systems. This collective endeavour seeks to illuminate the profound wisdom embedded in our heritage and its significance in addressing contemporary challenges. The intellectual traditions of India, spanning disciplines such as agriculture, medicine, governance, education, and environmental sustainability, have long shaped the fabric of our civilization, offering insights that remain relevant and adaptable to modern complexities. In an era marked by rapid technological advancements, shifting socio-economic landscapes, and environmental uncertainties, returning to the principles and methodologies of ancient

Indian knowledge systems is not merely an academic exercise but an imperative for sustainable development. This compendium, therefore, brings together a diverse range of perspectives to explore how traditional knowledge can inform and enrich present-day policies, innovations, and grassroots initiatives.

One of the most compelling aspects of Indian knowledge systems is their holistic approach to problem-solving. Whether it is Ayurveda's integrated philosophy of health and well-being, Vrikshayurveda's sustainable agricultural practices, or the Gurukul system's immersive and experiential model of education, these time-tested frameworks provide insights into resilience, balance, and harmony with nature. As we navigate modern challenges—climate change, food security, educational equity, and public health—there is much to learn from the way our ancestors approached these issues with deeply rooted wisdom and systemic thinking.

Moreover, the application of ancient practices in contemporary contexts need not be seen as a contrast between tradition and modernity. Rather, this compendium encourages an interdisciplinary dialogue that recognizes the complementarity between traditional knowledge and technological advancements. The integration of indigenous agricultural techniques with digital precision farming, the revival of sustainable architectural methods in urban planning, and the adaptation of classical pedagogical models in modern learning environments are examples of how the past can constructively inform the future. This initiative is also a reaffirmation of India's intellectual legacy and its contribution to global knowledge. Through meticulous scholarship, critical analysis, and practical applications, the essays in this volume seek to bridge historical insights with present-day needs, ensuring that our ancestral wisdom continues to serve as a guiding light for future generations.

I extend my heartfelt gratitude to all contributors, scholars, and practitioners who have enriched this collection with their research, perspectives, and unwavering commitment to preserving and applying India's knowledge systems. Also, I appreciate the efforts of Team-CMDR for their efforts to bring out the volume for the benefit of the masses. May this volume serve not only as a repository of intellectual heritage but also as a catalyst for meaningful actions that honor our traditions while addressing the pressing challenges of our times.

Prof. Kailash Chandra Sharma
Chairman, CMDR, Dharwad

Foreword

With pleasure, I am presenting this compendium of essays on Indian Knowledge Systems in addressing contemporary challenges. This compilation represents a significant milestone in our ongoing efforts to bridge ancient wisdom with modern necessities.

India's knowledge traditions span millennia, encompassing diverse disciplines from mathematics and astronomy to medicine, architecture, and philosophical thought. These systems were not developed in isolation but emerged through rigorous observation, experimentation, and documentation, hallmarks of what we today recognize as scientific methodology.

The essays contained herein demonstrate how these ancient knowledge systems offer sustainable solutions to pressing global issues. Our contributors have meticulously examined how Ayurveda's holistic approach provides alternatives to modern healthcare challenges; how traditional water harvesting techniques address water scarcity; how indigenous agricultural practices promote sustainability; and how ancient architectural principles inform energy-efficient design.

What makes Indian Knowledge Systems particularly relevant today is their integrated worldview, one that does not separate humanity from nature but recognizes their interdependence. This ecological consciousness, embedded in our traditions, provides crucial insights for addressing climate change and environmental degradation.

The Centre for Multi-Disciplinary Development Research (CMDR), Dharwad, has consistently advocated for a nuanced understanding of traditional knowledge systems, neither uncritically glorifying the past nor dismissing it as irrelevant. This collection adheres to this principle, subjecting traditional practices to scholarly scrutiny while acknowledging their potential contributions.

Our approach has been interdisciplinary, bringing together historians, scientists, practitioners, and policy experts to engage in meaningful dialogue. The essays reflect this diversity of perspectives, offering both theoretical frameworks and practical applications. I must emphasize that revitalizing traditional knowledge is not about retreating into the past but about creating a more sustainable future. It involves critical engagement with tradition, separating the essential from the obsolete, and adapting ancient principles to contemporary contexts. This process requires intellectual rigor, cultural sensitivity, and innovative thinking.

The publication of this compendium coincides with growing global interest in alternative knowledge systems. As we face unprecedented challenges—from public health crises to ecological breakdown—there is increasing recognition that conventional approaches alone are insufficient.

I extend my gratitude to all contributors whose scholarship has enriched this volume and to Team-CMDR, whose dedication has made this publication possible. May this compendium
stimulate further research, inspire practical applications, and contribute to a more inclusive understanding of knowledge itself.

The wisdom of our ancestors, when engaged with critically and creatively, can illuminate paths toward a more harmonious and sustainable future.

Prof. Basavaprabhu Jirli
Director, CMDR, Dharwad

A BRIEF ACCOUNT OF ESSAY COMPETITION

Centre for Multi Disciplinary Development Research (is an autonomous social science research institute recognised and fnancially supported by the Indian Council of Social Science Research (ICSSR Ministry of Education, Government of India as well as Government of Karnataka The aims and objectives of the Centre include, conducting research on issues of socio economic development and decentralized planning at the sub regional, regional and national levels in a multi disciplinary framework covering economic, social, political and cultural dimensions of human behavior There is also an attempt to combine judiciously the conceptual and empirical perceptions in its research studies The Centre has aims to examine the relevance of the received theories in social sciences which have alien origins and form new theories and conceptual frames of greater relevance to Indian conditions

Indian Knowledge Systems (IKS) Unit

The Indian Knowledge Systems (Unit at CMDR is dedicated to preserving and promoting India's rich heritage of knowledge systems This unit conducts research on various aspects of IKS, including traditional medicine, mathematics, astronomy, yoga, and more. They develop and integrate IKS modules into academic curricula to expose students to India's intellectual legacy Additionally, the unit organizes workshops, seminars, and conferences to disseminate knowledge about IKS to a wider audience Through collaboration with other institutions and organizations, the IKS Unit at CMDR fosters interdisciplinary research and knowledge sharing, contributing to the understanding and appreciation of India's unique knowledge systems

Essay Writing Competition

CMDR's IKS Unit was hosted an Essay Writing Competition to explore the relevance of Indian Knowledge Systems (in addressing contemporary challenges This competition was open to all Indian students, both domestic and international By researching into the rich heritage of IKS, participants can uncover the timeless wisdom that can be applied to modern problems.

RULES FOR ESSAY COMPETITION

Submission Guidelines / Essay Requirements
- Essays must be original and unpublished
- One entry per participant and Word limit 2500 3000 words
- Submission format: Typed, double spaced, Times New Roman,
- 12 point font.
- Submit entries via email : cmdriks@cmdr.ac.in
- Language: English / Kannada
- Margins: 1 inch on all sides and Pages must be numbered

Title page should include
- Essay title
- Participant's name
- Age and class with ID Number / Roll number
- The postal address of the Institution with the PIN code
- Name, Designation, and Contact details of the Head of the Institution
- (Landline, Mobile, and e Mail)
- Certificate from the Head of the Institution in institutional letterhead for authenticating the Bonafide student

Deadline
- Submission deadline: Midnight of 30 12 2024
- Late entries will not be accepted

Evaluation Criteria
- Evidence based content and originality (30%)
- Critical thinking and analysis (25
- Writing style and flow (20%)
- Grammar and vocabulary (10%)
- Structure and organization (5%)
- References / Sources of information gathered (10%)

Judging Process
- Initial screening by the organizing committee (only if the number of entries is more than 200)
- Qualified entries evaluated by the expert panel
- Top entries shortlisted for the final round and Winners selected by
- distinguished judges

Prizes
- **FIRSTPLACE** Rs. 10,000/-With Certificate
- **SECONDPLACE** Rs. 7,000/-With Certificate
- **THIRDPLACE** Rs. 5,000/-With Certificate
- **SPECIAL CATEGORY PRIZE**: Rs. 3, 000/-Certificate
  (Only if recommended by the panel of Judges)

Entries will be disqualified for
- ➢ Plagiarism
- ➢ Late submissions
- ➢ Not following formatting guidelines
- ➢ Multiple submissions
- ➢ False information

Rights

All entries become the property of CMDR and Participants retain intellectual property rights Winners may be featured in publications with due recognition

Announcement of Winners

Winners will be notified via email and results will be declared on CMDR's official website Miscellaneous

Miscellaneous

The organizers reserve the right to use relevant parts of submitted essays to bringout CMDR publications with due credit to authors.

In exceptional cases Judges may not recommend any essay for award of prizes. Decisions made by the judges are final

THE EVALUATION PROCESS

The evaluation process was designed to be impartial, focusing on criteria such as originality, clarity of thought, depth of research, and adherence to the competition's guidelines. By inviting following experienced judges, the competition aimed to uphold the highest standards of fairness and accuracy, ultimately recognizing and rewarding the most insightful and well-crafted essays.

Dr.Mohana,
Principal Scientist (Genetics and Cytogenetics)
In-Charge, Agricultural Knowledge Management Unit,
ICAR-Directorate of Cashew Research,
Puttur – 574 202 Dakshina Kannada District.

Prof Bhalchandra Laxmanrao Tembe
Visiting Professor, Chemistry
Member, Senate, Indian Institute of Technology,
Chikkamalligewad, Dharwad.

Dr. Triveni S.
Assistant Professor
Dept of Psychology,
Karnatak University,
Dharwad

The winners of the Essay Competition have been invited to receive their prize on the occasion of CMDRs Development Conclave.

The following students have been selected as winners of the Essay Competition in order of their score assigned by the Judges

Prize	Name	Topic
1st Prize	Ms.Diksha Banaras Hindu University Varanasi, Uttar Pradesh	Back to the "Aryavarta" Future: The Ultimate Jugaad Blueprint for Bollywood-level Chaos
2nd Prize	Ms. Kona Mahalakshmi Andhra university, Visakhapatnam	Back to Roots: Unlocking the Potential of Ancient Knowledge In the futuristic era
3rd Prize	Ms. Sakaray Vaishnavi, ICAR-Indian Agricultural Research Institute, New Delhi	Reviving Sacred Ecology: India's Ancient Practices As Solutions to Climate Change

Consolation Prize

Prize	Name	Topic
4th Prize	**Mr.Rajat Kumar Nath** ICAR- Indian Agricultural Research Institute, New Delhi	Ancient Practices for Modern Agriculture: Harnessing the Potential of Indian Knowledge System to Address Contemporary Challenges.
5th Prize	**Ms.Teegala Shruthi** Nizamiah Observatory Campus, CESS, Begumpet HYDERABAD, Telangana,	Indian Knowledge Systems: Relevance of Ancient Practices for Contemporary Problems
6th Prize	**Ms.Suadath. V** Nizamiah Observatory Campus, CESS, Begumpet HYDERABAD, Telangana,	Indian Knowledge Systems: Relevance of Ancient Practices for Contemporary Problems

Prizes have been distributed in the Inaugural Session of Two-Day Development Conclave on Transformation of Bharath: The Story of a Decade and Future Outlook 27 & 28 March, 2025 Dharwad.

Dr.R.Vishal, Secretary, Fiscal Reforms Government of Karnataka and Prof.Kailash Chandra Sharma, Chairman, Governing Council, CMDR distributing the prizes to Winners. Prof. Gowrish, Director, CESS also seen

Some of the prize winners could not attend the ceremony, and the certificate and prize money have been sent through post to such winners.

Indian Knowledge Systems: Relevance of Ancient Practices for Contemporary Problems

Diksha

Back to the "*Aryavarta*" Future: The Ultimate Jugaad Blueprint for Bollywood-level Chaos

The dinosaur-era Indian civilization was solving algebra while the rest of the world was still trying to figure out how not to set things on fire. If the ancient Indian sages had Twitter, we'd be getting 280-character sutras daily, and the hashtag #Vedic Wisdom would be trending worldwide, with every tweet ending in "*Namaste*" and a wisdom bomb! Indian Knowledge Systems—everything from Vedic mathematics to ancient surgery (yes, ancient Indians had plastic surgery; take that, Instagram!)—were the OG life hacks, way before "life hacks" even mastered the art of making chai without burning it. The "Hustle Culture" that we've glamorized today seems like a rickshaw in a Ferrari race compared to the *Mahabharata* lessons. The ancient epic taught us everything, from navigating complex family dynamics to managing economies and enhancing political wisdom. Even the legendary heroes, Arjuna and Duryodhana, could have benefited from some serious HR intervention.

Not to treat 5,000-year-old practices like the star of some National Geographic special, with a dramatic narrator and slow-motion shots of monks chanting, but these ancient systems still hold up way better than the latest application that helps us meditate for three minutes while the Wi-Fi sputters. Fast forward to today, as humanity grapples with climate change, mental health crises, broken political systems, economic disparity, digital overload, people naming their children after Wi-Fi routers (looking at you, Elon Musk), and existential dread (because TikTok trends are a real thing), we, the modern society, cling to our phones, hoping the next app update will solve world hunger—rather than turning to the dusty wisdom on parchment, which might hold the answers we've been ignoring in favor of double espressos and three-day workweeks.

India is the land where we find CEOs practicing yoga before IPO launches or villagers discussing quantum mechanics while sipping chai, where ancient scrolls debated cosmology and modern WhatsApp groups still debate whether or not onions cure flu. What if the answersto our current problems are not just out there in the digital ether, but hidden in ancient scriptures and practices that we've so conveniently ignored while binge-watching Netflix? This paradoxical symphony is made possible by the Indian knowledge systems, an eternal treasure chest of wisdom that fits into every era like ghee on a paratha. Let's explore how ancient practices fit snugly into our modern chaos, much like Elon Musk's tweets or AI-generated meal plans—solving problems with a pinch of charm and a dollop of coconut oil.

From Zero to Zodiacs: Our Ancestors Knew It All

The next time we're calculating EMIs on our home loans, using the GPS, looking at our watches, marveling at skyscrapers, booking a train ticket for Chhath Pooja, or staring at the stars during a power cut, we should remember how we're standing on the shoulders of ancient Indian mathematical and astronomical nerds. They had it all figured out, from the concept of zero (because sometimes life is just that empty) to planetary motion (probably while dodging the family dramas under the stars). The likes of Aryabhata were out there calculating the speed of light, solving quadratic equations, predicting eclipses, and inventing concepts like zero— while sipping on mango lassi—that help us with architecture, navigation, and even slicing our pizzas into perfect circles today.

Brahmagupta, Bhaskara, and other mathematical wizards computed zero—yes, the zero in our bank accounts, zero marks in math class when we didn't study, or the zero calories we think are in samosas when eaten with chai—along with fractions, equations, geometry, etc. We're still counting on it for everything from coding to cricket scores. Aryabhata, Varahamihira, Lalla, Shripati, Ganesh Daywanya, and other astronomers mapped the night sky, divided time, prepared calendars, calculated angles, studied planetary orbits, and would probably laugh at our inability to coordinate green signals while navigating through Bangalore traffic or calculate the compound interest on the seed funding for the startups today. Vedic maths, which saves us from financial ruin while dividing five lakh rupees among 200 guests (and still counting our dignity) during the Great Indian Wedding Budget Crisis, was figured out by Bharathi Krishna Tirthaji. So, from figuring out celestial mechanics, guessing star alignments, and strengthening the backbone of modern astrophysics, the wisdom of ancient mathematical geniuses, that makes us understand the universe through metaphors, stories, and critical thinking is woven to solve modern-day India's chaos.

Ancient Indian *Darshanas*: Holding Up Against Today's Turmoil
Ancient Indian *Darshanas* got us covered (as we figure out why our lives feel like a poorly scripted soap opera) and cracked the code to happiness way before self-help books like *The Subtle Art of Not Giving a F****—and that too without charging a subscription fee or peddling merchandise. *Tantra*, often misunderstood, is a spiritual power-up for modern-day dilemmas. Using rituals, mantras, and meditation, *Tantra* doesn't just help you feel connected to the universe; it enables you to reconnect to yourself when you've lost your zen between work deadlines and Twitter rants. *Bhakti*, the practice of devotion, teaches us that connecting with a higher power—whether it's Krishna, Shiva, or even the divine energy of your favorite coffee shop—can turn even the most chaotic day into a peaceful one.

Adi Shankaracharya's *Vedanta* teaches the oneness of self and universe, Gautama's *Nyaya* remains an antidote to misinformation—like a WhatsApp forward that claims that cow dung cures everything, Kanada's *Vaisheshika* categorized the universe, one atom at a time, long before Newton sat under that apple tree, Kapila's dualistic philosophy—*Sankhya* teaches balance between *Purusha* (soul), *Prakriti* (self) and is the perfect remedy for burnout culture (no Wi-Fi required), Jaimini's *Mimamsa* champions dharma, teaching accountability in relationships and workplaces far better than any employee handbook could, and Charvaka's YOLO philosophy prioritizes sensory joys—because sometimes a good samosa solves more than soul-searching ever could.

From Kaadha to Chyawanprash: *Ayurveda* Still Runs Our Lives (and Nani Approves)
Ayurveda, like that wise old uncle at family gatherings who dishes out unsolicited advice that's *annoying but always works*, is still relevant, from a runny nose to existential crises, in our modern-day chaos. As the modern world experiments with overpriced superfoods and complicated skincare routines, Ayurveda sips its Tulsi tea and says, "Beta, I told you so." Ancient Indian healers like Charaka—the god-tier doctor whose *Charaka Samhita* still holds up, or Sushruta—the ancient surgeon who pioneered rhinoplasty way before it became Hollywood's preferred pastime, or Vagbhata—who wrote about diet and metabolism so that our mothers could shout, "Don't eat cold food!", or Jivaka—the royal physician who even Buddha trusted, or Agastya—the mastermind behind *Chyawanprash*, or Nagarjuna—the Iron Man of Ayurveda who turned metals and minerals into life-saving potions, were the pioneers of holistic medicine.

While the West markets Ayurveda's golden boy—haldi doodh as a "golden latte" at 400 bucks a cup, our desi mothers have been force-feeding it to us since we were five. Ancient Indians were already sprinkling turmeric on everything, from curries to wounds, long before modern nutritionists raved about it as a superfood. Ayurvedic dietary practices balanced doshas while our taste buds danced as food isn't just about eating but also healing. Regional cuisines also thrived, blending local ingredients and spices into culinary masterpieces. Even Sushruta linked diet to health, prescribing meal plans for post-surgery recovery. Ashwagandha, an herb that screams "chill out," manages stress faster than our HR can create another "employee wellness" email. The Ayurvedic Amla oil sessions with our Nani—half therapy, half lecture on why we're still single—have been rescuing scalps for centuries. The ancient practice of yoga offers an entire lifestyle—to attain mental clarity, spiritual enlightenment, better flexibility, and deep self-awareness while the modern apps promise 3-minute meditation sessions to calm our minds (with a side of ads, of course). In the future, when we're all living in space (not acting like it's not going to happen), we'll probably be using Patanjali's yoga sutras to meditate between intergalactic Zoom calls.

Indian kitchens turned into full-fledged labs, brewing Tulsi, ginger, honey, and black pepper kaadhas, the avengers of immunity when COVID hit. Even Cleopatra would've swapped her milk bath for the haldi, besan, and curd ubtan had she known about the glow it gives. While modern diets demonize carbs and fats, Ayurvedic texts called ghee the "liquid gold," and let's be honest, nothing tastes better than parathas drowning in pure desi ghee. Centuries before therapy apps, ancient doctors prescribed herbs like Ashwagandha, Shankhpushpi, and Brahmi along with meditation and yoga for stress—our national pastime. So, next time life gives us a headache—whether it's our boss, traffic, or studies—we should take a deep breath, chant an "*Om*," and let Ayurveda handle it instead of reaching for painkillers.

Old-School Social Sciences: Fixing Today's Havoc Like It's 5000 BCE
Kautilya's *Arthaśāstra* is a masterclass in governance that we desperately need for modern politics, which feels like a reality show gone wrong. Chanakya, who would have slayed on LinkedIn, advised rulers on everything from taxation to espionage, proving that ancient India didn't just govern, it ruled with finesse. His ideas on wealth distribution could school modern policymakers still fumbling over economic inequality. Ancient India had *dharma*, the gold standard for ethics and justice, for us struggling with moral dilemmas. Office politics might finally include actual ethics if corporate CEOs applied *dharma*. From Arjuna's existential crisis in the *Bhagavad Gita* to Manusmriti's guide to societal roles, these texts offer timeless solutions for balancing duty with conscience.

The *Arthaśāstra's* takes on trade, taxation, and wealth creation make modern GDP forecasts seem shallow as Kautilya comes to the rescue. The ancient wolves of Dalal Street had mastered concepts like free markets and fair trade long before "supply chain" became a buzzword. Even barter systems described in texts inspired modern cashless economies like UPI! Instead of PowerPoints, HR teams could borrow from the *Mahabharata's* nuanced understanding of alliances and conflicts. The ancient sociology texts studied caste, kinship, and cultural norms, offering insights that can untangle today's diversity and inclusion challenges. The Panchayati Raj system, inspired by ancient Indian local governance, empowers rural communities and bypasses the bureaucratic nonsense of big government. It's like decentralizing power, but without needing a thousand-page policy on it. If only our politicians would take a page from Kautilya's book instead of passing "strategic reforms" that end up confusing everyone, including the economists. Maybe then we'd get a budget that doesn't feel like it was written during a coffee break.

While today's world tries to solve chaos with apps and AI, ancient India taught us *Vasudhaiva Kutumbkam*, reminding us that global harmony, governance, morality, and community-building don't need tech—they need timeless wisdom.

Indian Architecture and Engineering: Showing High-Tech Ruckus Its Place with Grandpa-Approved Solutions
Vastuśāstra —the numero uno feng shui solution for cluttered desks to chaotic city plans—aligns buildings with natural forces and teaches us a thing or two to prevent modern disasters. Today's urban planners obsess over green buildings, but ancient India had entire cities like Mohenjo-Daro that balanced functionality and sustainability long before eco-certifications were a thing. Modern engineers are busy reinventing rainwater harvesting for water shortages, but step-wells like Gujarat's Rani ki Vav already nailed it centuries ago. Stepwells and tanks like the Chand Baori were conservational architectural marvels that combined utility with aesthetics. Today, as cities grapple with water shortages, ancient India's methods look like the solution we've been too busy ignoring.

Standing tall for over 1,600 years without rusting, the Iron Pillar of Delhi is ancient India's mic drop in metallurgy. Pioneers like Rishi Kashyapa documented advanced metalworking techniques that would make today's aerospace engineers jealous. Even modern-day engineering marvels draw inspiration from Vastu principles that guide many hospitals and schools for better energy flow. Meanwhile, AI-based water management borrows heavily from traditional systems like temple tanks that ensure equitable resource distribution. The intricacy of Konark's Sun Temple or Hampi's stone chariot is proof that ancient architects were both practical and artsy. Whether it's designing efficient homes, managing resources, or creating timeless engineering feats, India's ancient wisdom continues to solve problems with more elegance and foresight than most modern solutions.

Prehistorically Aged Military Science: When Strategy Was an Art and Not Just a Tweet
Kautilya's *Arthaśāstra* was basically a PhD in statecraft, espionage, and military strategy. Chanakya taught kings how to outwit enemies with alliances, psychological warfare, and good old bribery—long before corporate boardrooms made it cool. Military academies and think tanks, today, analyze these texts for lessons in strategy. Whether it's tackling cyber threats or resolving geopolitical conflicts, ancient Indian military science proves that clever planning, moral restraint, and strategic diplomacy never go out of style.

The *Mahabharata* introduced celestial weapons like Brahmastra, which sounds like a cosmic nuke but also came with a user manual on ethical usage (something modern warfare could use). Military formations like the *Chakravyuha* weren't just ingenious; they've inspired modern-day defense strategies. Ancient India prioritized diplomacy over bloodshed. Ashoka, once the poster boy of violent conquest, turned into the Dalai Lama of his time after the Kalinga war, spreading peace through Buddhist principles. If today's leaders took a leaf out of his rock edicts, there would be less war and more wisdom. While modern militaries flex their tech, ancient India reminds us that true strength lies in brains, not brawn. If Kautilya were alive, he'd probably be headlining global defense summits—and cracking jokes about modern tactics over a cup of *soma*.

Agricultural Eco-Geniuses of Ancient India: Saving the Planet Before It Was Cool
Texts like the Manusmriti and *Arthaśāstra* didn't just outline sustainable practices; they made eco-conscious living mandatory. While modern environmentalists preach "sustainability," ancient India was already living the green dream—minus the PowerPoint presentations. Crop

rotation, organic farming, and water conservation weren't just buzzwords; they were survival strategies. Long before the West caught on to "going organic," our ancestors mastered soil fertility without synthetic fertilizers, using compost and green manure. The edicts of King Ashoka, the original environmental activist, promoted afforestation and banned unnecessary animal slaughter—a policy more progressive than many modern governments. The ancient practices of revering forests as sacred spaces can solve the problems of pollution, deforestation, and biodiversity loss.

Texts like the *Krishi-Parashara* detailed soil types, weather patterns, and sustainable farming practices such as crop rotation and organic farming long before satellite weather forecasts existed. They even managed pest control without toxic sprays, using neem leaves and turmeric, proving that nature is always in vogue. Varahamihira's works on predicting seasonal changes helped farmers plan harvests better than today's unpredictable weather apps. The practice of intercropping—planting multiple crops together for mutual benefit—was common and eco-friendly, something modern sustainable agriculture strives to replicate.

Forestry wasn't just about planting trees but creating balanced ecosystems. Ayurvedic gurus were leagues ahead when it came to planting knowledge, cataloguing thousands of medicinal plants, from neem to Tulsi, and turning them into remedies still used today. Modern pharmacology might call it "alternative medicine," but those herbal concoctions were the oldie goldie painkillers. Sore throat? Chew a bit of mulethi. Skin issues? Neem pastes to the rescue. Trading fast fashion for Ahimsa and fast food for foraged herbs in an era of melting glaciers and shrinking forests is the only way. Living in harmony with nature isn't just poetic; it's pure survival.

Turns Out, the Past Wasn't Just for Instagram Aesthetics—It Has Answers Too!
As we scroll through our feeds, stuck in bottleneck traffic, pondering the meaning of life (or why your laptop insists on updating during a Zoom call), trying to find meaning between TikTok dances, agonizing over unread emails, or wondering why your phone's autocorrect keeps sabotaging your texts, consider this: what if the solutions to our modern problems aren't buried in the next app update or hidden behind a filter, but rather neatly tucked away in ancient scrolls, gathering dust on a forgotten shelf? The same scrolls that once held the answers to everything from mathematics to metaphysics, from warfare tactics to why your aunt insists that a good marriage is all about having the right *gharelu nuskhe* up your sleeve. It might just be the most reliable app we've had in 5,000 years—minus the notifications, charging, pop-up ads, and guarantees a deep sense of clarity.

While we're trying to navigate the 21st century with its endless screens, apps, and existential questions, we might just want to pause for a moment and look backward. Ancient Indian wisdom, a treasure trove of knowledge about everything from mathematics to medicine, could be the key to solving the modern mayhem. Sure, we're obsessed with the latest gadgets and trends, but the "*jugaad*" mindset of the Vedic era, combined with their pragmatic approach to life, might just hold the solutions we've been overlooking. From Aryabhata's zero to Sushruta's surgery, these ancient practices were not just ahead of their time—they were timeless. The beauty of these ancient systems lies in their simplicity and holistic approach. Ayurveda doesn't require a yoga app to fix your back pain; a simple cup of ginger-Tulsi tea might just do the trick. The wisdom of the Mahabharata's epic battles doesn't need to be rehashed on a reality TV show—it's about understanding the nuances of conflict and reconciliation, which we all need in the modern workplace. Whether it's Tantric rituals for mental peace or the engineering marvels of stepwells and iron pillars, ancient Indian wisdom was far more in tune with nature than we ever were—and perhaps, still are.

To wrap things up, the next time life throws us a curveball—be it work stress, traffic jams, or the latest viral trend—let's try reaching for some wisdom that's stood the test of time. Perhaps it's time to make the past the new future—minus the Wi-Fi, of course. After all, ancient knowledge is like that reliable old friend who's always there with a solid piece of advice—and a warm cup of chai.

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Back to Roots: Unlocking the Potential of Ancient Knowledge in the Futuristic Era

Kona Mahalakshmi

Introduction:

How can a tradition that dates back thousands of years still provide answers to the complex issues of the modern world? Well, The Indian Knowledge System (IKS) offers robust evidence of its potential to offer innovative, holistic, and sustainable solutions to contemporary problems, effectively bridging ancient wisdom with modern needs. From the profound philosophies of the Vedas to the scientific precision of Aryabhata's astronomy and the practical governance models of Kautilya's Arthashastra, Patanjali's Yoga Sutras, as well as the health sciences of the Charaka Samhita, Sushruta Samhita, these ancient systems are a repository of wisdom that transcends time. There is profound verse in Rigveda "*Aa no bhadra kruthavo yanthu viswathaha*" (Rig-Veda 1.89.1) meaning, "Let the noble thoughts come to us from every side" This reflects the openness and inclusivity of the Indian Knowledge Systems, emphasising the acceptance of knowledge from all directions for the betterment of humanity.

Ancient India, or *Bharatavarsha,* is often praised as one of the world's most advanced and culturally rich civilizations, renowned for its contribution to knowledge, spirituality, governance and science. It gave birth to profound philosophies and spiritual traditions that shaped human consciousness and moral values. The excellence of Bharatavarsha lies in its deep-rooted traditions, intellectual achievements, and enduring philosophies that continue to influence the world today. Texts such as the Vedas, Upanishads, Bhagavad Geeta, and the Puranas laid the foundation of soulful introspection, realization of inner truths, and living with ethical purpose. These texts explore complex ideas like the Nature of the universe, the self (Atman) and the concept of ultimate reality (Brahman). Practices like yoga, meditation, and spiritual disciplines aimed at mental peace and self-control have become core elements of Indian ethos. In a time defined by complex global challenges, the timeless wisdom of Bharatavarsha offers practical solutions and philosophical guidance through disciplines like Ayurveda, Yoga, Astronomy, Vastushastra, Mathematics and many more.

Modern India is combating with a myriad of complex and interconnected problems, including widespread economic inequality, rising unemployment, and a lack of adequate opportunities for the youth. The education sector faces challenges related to quality and inclusivity, while the healthcare system struggles with insufficient infrastructure and accessibility. Environmental issues such as air and water pollution, deforestation, and climate change further compound the situation, threatening public health and biodiversity. Social problems like caste-based discrimination, gender inequality, and communal tensions persist, hindering progress toward an equitable society. Additionally, balancing technological advancements with concerns over data piracy, cybercrime, and the ethical use of artificial intelligence poses another significant challenge. The erosion of traditional values, coupled with the pressures of globalisation, contributes to identity crises and social unrest, leaving India at a crossroads between its rich heritage and the demands of a rapidly modernizing world. These contemporary problems from environmental crisis to economic inequality, technological advancement, and social injustice are interconnected and demands urgent attention. These challenges call for both groundbreaking solutions and a critical re-evaluation of underlying assumptions.

Bridging Ancient Wisdom with Modern Needs:

Gurukul Legacy in Education: The Gurukul system, an ancient Indian method of education, emphasized the holistic development, character building, and a deep connection between teachers and students. It focused on nurturing not just academic knowledge but also values, moral integrity, and practical life skills. This indigenous system sought to cultivate well-rounded individuals who were disciplined, self-aware, promoting deeper engagement, and understanding. Gurukul education involved in hands-on learning, applying knowledge to real life scenarios, such as farming, construction, and governance. Similarly, Gurukul's emphasis on community-oriented learning encourages students to develop a sense of responsibility toward society, an aspect often overlooked in conventional schooling systems.

Education is not merely the accumulation of information in the human brain; it must focus on character development, self-growth, and life-building principles. Without these essential components, true value from education not fully achieved, yet many students remain unaware of this deeper purpose. The colonial era led to the systematic suppression with Western Education and governance models replacing indigenous knowledge. Modern education has undoubtedly brought remarkable advancements, particularly in technological access and specialised knowledge but there remains a vital need to reconnect with the principals of Gurukul. Today, teacher-student relationships are often transactional and impersonal. Reviving mentorship models inspired by the Gurukul system can improve student engagement, motivation, and personal growth. For instance, Shantiniketan, Rabindranath Tagore's educational institution, embraced Gurukul principles, fostering holistic development through art, literature, and close teacher-student interaction also Finland's education system or experiential learning programs in India. Virtual classrooms and digital resources, when aligned with traditional Gurukul values, can foster both knowledge acquisition and character development. Ultimately, modern learning systems stand to benefit from the timeless wisdom of Gurukul. By embracing a synthesis of tradition and innovation, we can cultivate individuals who are both academically skilled and ethically grounded, prepared to thrive in a rapidly evolving world.

Ayurveda & Yoga for Balanced Living: Ayurveda, known as 'the science of life', is an indigenous medical science that originated in India. A system of natural healing which focus balance among the three doshas (Vata, Pitta, Kapha) and integrates diet, herbal remedies, and lifestyle adjustments to prevent and cure illness. Ayurveda's Rasayana therapies and immune-boosting herbs like Turmeric, Tulsi, Giloy, Aswagandha, etc., build resilience by enhancing the body's natural defences. The use of turmeric (curcumin) in Ayurveda has been extensively studied for its anti-inflammatory and antioxidant properties, with research from Johns Hopkins University supporting its efficacy in managing arthritis. Conditions like diabetes, hypertension, obesity and cardiovascular diseases are on the rise due to sedentary lifestyles and unhealthy food habits. Ayurveda focus on Dinacharya (daily routines) and Ritucharya (seasonal regimens) to maintain health. Treatments like Panchakarma (detoxification) and herbal remedies promote long-term well-being, while dietary guidelines address root causes rather than symptoms. Texts like the Charaka Samhita and Sushruta Samhita detailed surgical procedures, pharmacology and principles of nutrition, many of which are being validated by modern science.

Yoga, an Age-old Indian discipline, has become a global phenomenon, renowned for its ability to enhance both physical and mental well-being. Patanjali, is an ancient sage and philosopher who is traditionally credited with compiling the Yoga Sutras, a foundational text

of classical yoga philosophy. Its teachings offer practical solutions for mental health, stress management, self-discipline, and fostering holistic well-being. The practice of yoga encourages mindfulness, which involves being fully present in each moment, having awareness of thoughts and sensations without judgement. Yoga, embraced by over 300 million practitioners worldwide, has been endorsed by the United Nations, which declared June 21 as International Yoga Day. In the words of the Bhagavad Gita, "Yoga is the journey of the self, through the self, to the self." It invites us to embark on a journey of self-discovery and healing.

As the world races forward with its remarkable technological advancements, humanity is confronting unprecedented physical, mental, and emotional challenges. Stress, chronic diseases, lifestyle disorders, and a disconnection from nature are increasingly common. Modern medicine often highlights solely on physical symptoms, rather than preventive care. A Harvard study found that mindfulness-based practices, rooted in yoga, significantly reduce stress and improve cognitive functioning. The Indian knowledge systems, Ayurveda, Yoga, being ancient, their principles are universal and can customise to modern lifestyles. During the COVID-19 pandemic, traditional immunity-boosting practices rooted in Ayurveda, such as the consumption of herbs like Ashwagandha and Giloy, gained renewed interest. The Ministry of AYUSH launched campaigns promoting these remedies, bridging traditional healthcare with modern public health policies. By addressing root causes, they offer sustainable solutions to the chronic issues of today, reducing dependency on pharmaceuticals and invasive procedures. By integrating these ancient practices into contemporary life, we can discover balance, resilience, and a deeper connection to the essence of living.

Kautilya's Blueprint for Modern Governance and Ethical Leadership: "The welfare of the people is the ultimate law," a renowned quote by Kautilya, encapsulates his visionary approach to governance. A pivotal figure in Indian history authored the *Arthashastra*, an ancient treatise on states craft, economic policy, military strategy, and the principles of effective governance. The Arthashastra is highly pragmatic and realistic, reinforcing practical solutions to governance rather than idealistic visions. It served as a manual for rulers in ancient India shaping governance practices and strategies for centuries. Many principles in the Arthashastra remain relevant today, such as the emphasis on economic planning, strong leadership, intelligence gathering, and strategic alliances remains vital in tackling global challenges.

In the current epoch where corruption and lack of accountability plague governance, Kautilya's emphasis on morality and public welfare can inspire modern leaders to adopt transparent and people-centric policies. The ruler expects to be well informed, and accountable, prioritizing the well-being of citizen's over personal gain. Modern economies struggling with inflation, unemployment, and inequality that can relied on efficient resource allocation and the balance between state intervention and market forces. Contemporary leaders, such as Singapore's founding father Lee Kuan Yew, have drawn inspiration from principles similar to those outlined in the Arthashastra, particularly its focus on efficient resource management and the prioritization of public welfare. The Arthashastra by Kautilya is a masterpiece of ancient Indian political thought, blending philosophy with practical strategies for governance. Its enduring wisdom continues to inspire leaders, economists, and strategists, making it a corner stone of India's intellectual and cultural heritage.

Tradition meets technology: India has a rich history of science and technological advancements, deeply rooted in its traditional knowledge frameworks. Ancient

Mathematicians like Aryabhatta, Bhaskaracharya, and Brahmagupta made ground breaking contributions to algebra, calculus and geometry. The concept of zero, decimal notation, and trigonometry originated in India. Texts like the *Surya Siddhanta* provided precise calculations of planetary positions, eclipses, and the Earth's circumference. ISRO has drawn inspiration from these ancient Indian astronomical texts for precise calculations of celestial phenomena. These methods, have parallels with contemporary astrophysics and satellite technology. The United Nations' Sustainable Development Goals (SDGs) emphasize sustainable agriculture, clean energy, and responsible consumption. Traditional Indian practices like crop rotation, organic farming (Rishi Krishi), and stepwell water conservation systems directly address these goals. The revival of stepwell architecture, as seen in projects like the restoration of Rani ki Vav in Gujarat, is an example of merging traditional water conservation techniques with modern urban planning. Indian metallurgists excelled in crafting rust resistance iron (e.g., the Iron Pillar of Delhi) and high-quality steel (wootz steel), which were highly sought after in global trade also demonstrates the potential for developing materials with minimal environmental impact.

Vastu Shastra, the ancient science of architecture, emphasized harmony between structures and their natural surroundings. These principles, advocates natural ventilations, sunlight optimization, and eco-friendly materials, offer solutions to reduce energy consumption in modern buildings. In Japan, Vastu Shastra principles align with the Wabi-Sabi philosophy, emphasizing harmony with nature. In Indian temple architecture, climate responsive designs such as passive cooling systems, earthquake resistant structures, and sustainable urban planning contribute to enhanced resilience and functionality. Combining ancient principles with cutting-edge technologies yield innovative solutions. For example, using Artificial Intelligence (AI) to analyze ancient astronomical data, applying Nano-technology to study bioactive compounds in Ayurvedic herbs, enhance their application in modern medicine. Digitizing these historical methods and incorporating their knowledge into STEM curricula can bridge gap between tradition and modernity.

Addressing Roadblocks:
Indian Knowledge Systems (IKS) with their holistic approach and practical relevance, hold immense promise for resolving contemporary issues. IKS is fraught with historical neglect, socio-political dynamics and the dominance of modern global paradigms. Centers of learning like Nalanda and Takshashila, once hubs of intellectual activity, were destroyed due to invasions and many remaining manuscripts are scattered and inaccessible. IKS is predominantly recorded in classical languages like Sanskrit, Pali, and Prakrit, which are unfamiliar to most people today. Practices like Yoga have been commercialized globally, often stripped of their philosophical and spiritual essence. Despite international frameworks like the Convention on Biological Diversity, India faces challenges in safeguarding traditional knowledge against biopiracy and misuse.

Modern lifestyles and Western culture often conflict with the principles of simplicity and sustainability emphasized in IKS. Efforts to popularized these indigenous systems often fail to effectively engage in diverse demographics. Incorporating IKS into modern governance, healthcare, and education systems faces resistance from policy makers and educators who view these systems as outdated. Government initiatives to revive ancient Indian knowledge systems are often hampered by red tape and lack of coordination.

Pathways to the Revival of Traditional Indian Heritage:
Establishing dedicated research centers to digitize, translate, and study ancient texts is essential in reviving Indian Knowledge Systems. Incorporating IKS into school curricula through experimental learning can foster greater appreciation among younger generations. Documentation and preservation of ancient texts, manuscripts, and oral traditions are key pathways in reviving ancient Indian wisdom. Increased funding for IKS initiatives and collaboration between academia, government and private institutions can accelerate revival efforts, for instance, collaborations with tech companies to digitize manuscripts (e.g., Google's digitization project) and, encouraging initiatives like The New Education Policy (NEP) 2020 emphasizes integrating IKS into the curriculum, fostering a blend of traditional wisdom and modern knowledge. Ensure that ancient practices are revived and practiced in their authentic forms, respecting their culture and philosophical roots. Another important step is promoting interdisciplinary research, where traditional knowledge is studied alongside modern science. Empowering local communities, particularly artisans, craftspeople, and rural populations, will also play a crucial role. These groups often hold deep knowledge of traditional practices like weaving, agriculture, and metallurgy, which can be revitalized through support and sustainability-focused policies. By preserving and integrating these knowledge systems into modern life, India can ensure that its rich cultural heritage continues to thrive.

As a Final Thought:
"The greatest wisdom is not that which is new, but that which has stood the test of time." These insightful observations reinforce the timeless relevance of ancient knowledge in shaping a sustainable future. For instance, mindfulness and meditation, rooted in ancient traditions, are now widely acknowledged as effective tools to combat modern stress and anxiety. The Gita's emphasis on self-discipline and detachment can guide leaders in making ethical decisions amidst global crises. Unlike the predominantly exam-centric approach today, the Gurukul system focused on nurturing a student's intellectual, physical, emotional, and spiritual growth. Sustainable agricultural methods, practiced by our ancestors, align perfectly with today's need to address environmental concerns. Likewise, the principles of community living and holistic health in ancient cultures offer guidance for tackling isolation and lifestyle diseases in the modern world. Such wisdom, forged over centuries of experience, bridges the past and present, proving it is eternal in navigating the challenges of today.

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5. '*The Indian Knowledge System: An overview*' by A.K. Sharma
6. '*Modern Science and Vedic Science*' by V.N. Jha
7. '*Integral Education*' by Sri Aurobindo
8. '*The Art of living: Vipassana Meditation*' by S.N. Goenka
9. '*Vedic Physics: Scientific Origin of the Vedas*' by S.S. Sastri
10. '*Mathematics in Ancient India*' by Datta and Singh
    And other Government websites on the Internet

Reviving Sacred Ecology:
India's Ancient Practices as Solutions to Climate Change

3

Sakaray Vaishnavi,

"One should protect rivers, mountains, forests, and all living forms as one protects one's own body."
- Mahabharata, Shanti Parva (262.47)

In today's world, nations are battling with climate crisis and environment degradation. People are suffering from new variants of virus, diseases and disorders because of abuse and exploitation of nature. Everyday world doesn't pass without naming the cyclones, floods, droughts and what not! On top of that melting glaciers, thousands of species and sub-species of flora and fauna are becoming endangered posing biodiversity at risks, those harmful chemicals and non-biodegradable inventions only adds to the threats causing great loss to climate along with increasing global warming, disappearance of protective ozone layer only makes perilous to lifeforms. Skyrocketing nature of resources exploitation, explains why the consumption of natural produce has outgrown the production efficiency of nature.

CURRENT SCENARIO
According to a report by Global Resources Outlook (2024), resource use increases around 60 percent from 2020 levels by 2060, while food and fibre biomass extraction, primary energy, and area of agricultural land increases by 80, 50, and 5 percent, respectively, potentially eroding native habitat and expanding biodiversity risks.

Data by Global Footprint Network's on Earth Overshoot Day calculates that in 2024, it was observed on June 5th while in the year 2023, it was landed on August 2nd. It is implied that it requires 1.75 Earth to generate resources to fulfil the current rate of consumption. Earth Overshoot Day is marked when the resource usage for that year exceeds the yearly production capacity of Earth.

A study by Chenling and Ming (2023), states that governance and policymakers should focus on introducing carbon trading market, imposing carbon taxes, providing economic incentives for reducing carbon emissions and expanding carbon sinks. Also, it highlighted that financial institutions can become part of green finance projects that protects and restores carbon sinks by investing in forestry and wetland conservation projects.

ANCIENT KNOWLEDGE SYSTEMS OF INDIA
India's ancient and indigenous knowledge systems are deep seated in cultures, festivals and traditions and are mentioned in various scriptures which can offer it to the world to combat climate crisis and environment degradation. These knowledge systems show sacred reverence towards protection of nature and lifeforms. Our scriptures like Vedas, Upanishads, Bhagavad Gita, Ayurveda, Arthashastra, Itihaasa (Epics), Sankhya philosophy and many others., expounds the sustainable and harmonious living with nature.

Bhagavad Gita advocates for *Lokasamgraha* (welfare of all beings), emphasizing the interdependence of humans and nature, and collective responsibility for climate action.

Ancient Indians developed *Panchangam* (almanacs) that aligned farming practices with seasonal agricultural cycles which enhances climate-resilient agriculture. Bhagavad Gita verse 3.12 roughly translates to *the one who enjoys without offering back is a thief,* which advocates for reciprocity with nature, aligning with sustainable consumption and environmental ethics and, also in recent relevance of carbon trading market, green carbon market and net-zero carbon emissions.

CELEBRATING NATURE

World Environment Day falls on June 5th annually, to celebrate environment focusing on the selected theme for that year. This special occasion gives us chance to know about our environment and take action to protect it. While in India, every festival, culture and tradition are deeply inspired from the environment and it follows the seasonal cycle, thus it highlights protection of nature and preaches sustainable usage of resources. It also gives us chance to pay back to nature. India's festivals and cultural practices have deeply embedded in traditions that reflect respect for nature and environmental conservation. These celebrations and rituals often embody sustainable living principles, showing reverence for natural elements. Table (a), presents the significance of certain practices, traditions and festivals.

Table (a) showing the significance of practices, traditions and festivals:

Names	Significance
Makar Sankranti/ Pongal	Celebrated in January especially when the Sun's position is transitioning into Capricorn (*Makara*), marking the harvest season. It promotes gratitude for the sun, soil, water, and other natural elements. Traditional kite flying avoids large-scale electrical decorations, focusing on simple festivities. The festival involves boiling freshly harvested rice in earthen pots, symbolizing harmony with nature.
Holi	In March it is originally celebrated using natural colours from flowers and plants like turmeric, neem, and hibiscus. It is often linked to seasonal agricultural cycles.
Bihu (Assam)	A spring festival in April celebrating the agricultural cycle. Involves cattle care and worship, emphasizing the symbiotic relationship between humans and animals.
Onam	In August–September, a harvest festival celebrating the agricultural abundance in Kerala. Includes rituals like *pookalam* (floral arrangements) that showcase floral biodiversity. It checks the unsustainable consumption and waste management.
Chhath Puja (Bihar, Uttar Pradesh and Jharkhand)	In October–November month, people worship the Sun God and rivers, especially the Ganga, for sustaining life. Promotes cleaning of water bodies and emphasizes water conservation.
Ganga Dussehra (Uttarakhand, Uttar Pradesh and Bihar)	In May–June month, the descent of the Ganges from heaven to Earth is worshipped. Encourages the cleaning of rivers and reverence for freshwater ecosystems.

Van Mahotsav	Especially in July, a modern afforestation festival inspired by ancient Indian traditions of tree worship. Communities plant millions of trees to restore forest cover and biodiversity.
Khecheopalri lake Festival (Sikkim)	During March, Sikkim people are dedicated in celebrating sacred Khecheopalri Lake. Visitors clean the surroundings and refrain from polluting the lake, reflecting ancient reverence for natural water sources.
Bishnoi community festivals in Rajasthan	The Bishnoi community celebrates festivals and rituals promoting wildlife protection, inspired by their founder Guru Jambheshwar's teachings. They are dedicated their lives in protecting the blackbuck and preserving native forests.
Nag Panchami	People in July–August months, worships snakes as guardians of water and fertility. Promotes the conservation of reptiles and their habitats.
Sarhul (Jharkhand, Odisha and Chhattisgarh)	Tribals during March–April, celebrates the flowering of the *Sal* tree, a keystone species in forests, which encourages sustainable forest use.
Kadalekai parishe	In November, farmers of Karnataka celebrate the first groundnut harvest with rituals. Promotes sustainable agriculture and community bonding.
Sacred groves across India (e.g., Khasi Hills in Meghalaya, Kodagu in Karnataka)	Groves are protected as sacred spaces, conserving biodiversity and carbon sequestration. Communities refrain from cutting trees or hunting animals in these areas.
Community-Managed water systems	Tamil Nadu's *Eris* and Rajasthan's *Johads* inspires generations in sustainable water harvesting, its management and responsible usage.
Worshipping Mount Kailash	Revered as a sacred site, promoting ecosystem protection. Also, there is worshipping of idols made up of special marbles or stones of mountains, signifying soil is weathered and formed from mountains, which sustains lifeforms on earth. Those marble stones also have medicinal significance in Ayurveda.
Narmada river festivals	Worshipping of river Narmada, by offering oblations in Madhya Pradesh, Maharashtra, Telangana states with different names like Narmada Jayanti, Narmada Pushkaralu and lighting lamps at river Narmada on Karthika Poornima.
Tulsi poojan (Holy Basil)	Considered sacred in Hindu households, as it has medicinal and air-purifying qualities. Households in South India, in Karthika month celebrates Tulsi pooja, which encourages greening of spaces and awareness about biodiversity.

Cow worship	Govardhan pooja (during Diwali), celebrates the cattle as it is recognized as central to sustainable agriculture. Also encourages organic farming through cow-based fertilizers, relying on sustainable energy (cow-dung fuel), reduces dependence on burning fossil fuel.
Rath Yatra and Eco-Friendly Idols Odisha (Puri) and other states	Festivals like Rath Yatra increasingly use eco-friendly practices, such as replacing harmful paints and materials with biodegradable options.
Eco-Ganesha in Maharashtra and South India	Ganesh idols made from clay and plant-based colours avoid water pollution, reflecting ancient values of environmental harmony.

PANCHABHUTAS

The concept of Panchabhutas is central to the ancient scriptures and ancient Indian civilizations. Term Panchabhutas signifies Five elements viz., Earth (Prithvi), Water (Apas), Fire (Agni), Air (Vayu) and Space (Akasha). Ayurveda expounds that, "*sarvam dravyam hi panchbhautikam,*" means all substances in the universe is made up of these five elements and its combinations. From scriptures it's clear that how much importance ancient people hold on Panchbhutas.

The four Vedas discuss the Panchabhutas extensively, emphasizing their divine origins and roles. Rigveda refers to these elements as manifestations of cosmic forces and deities. For instance, Agni (Fire) is revered as a purifier and sustainer. Earth is compared to Mother and Sky is compared with Father (Rigveda: 1.164.33).

Taittiriya Upanishad (2.1.1) describes the sequential creation of elements, it states that Akasha gives rise to Vayu, which creates Agni, leading to Apas, and finally forming Prithvi. Chandogya Upanishad (6.2.3) explains that all matter originates from and dissolves back into these elements. Thus, Upanishads discuss the Panchbhutas as the essence of creation. Atharvaveda highlights the interconnectedness of these elements and their role in human life and nature, which inspires harmonious living.

Verse 4th in Chapter 7th of Bhagavad Gita roughly translates to "Earth, water, fire, air, ether, mind, intellect, and ego are my (Lord Krishnas's) separated material energies." This emphasizes the divine nature of the elements and their role in sustaining life and spiritual practice.

In Arthashastra written by Kautilya, there is mention of worshipping the fire, water and earth elements. Then people used to show deep respect to the nature in the form of offerings, oblations to Agni, Indra and Mountain gods whenever there are natural calamities.

In Sankhya philosophy, the Panchabhutas emerge from Panchatanmatras (subtle elements) as part of the process of cosmic evolution, Akasha (Space) originates from sound (*shabda*), Vayu (Air) emanates from touch (*sparsha*), Agni (Fire) linked to form (*rupa*), Apas (Water) associated with taste (*rasa*) and Prithvi (Earth) connected to smell (*gandha*).

The Puranas, including the Vishnu Purana and Garuda Purana, narrate the divine origin and interplay of the Panchabhutas in cosmic creation. Vishnu Purana describes the elements as expressions of Lord Vishnu's energy, forming the universe. Garuda Purana discusses the purification of the elements in the context of spiritual practices and rituals.

Vastu Shastra integrates Panchabhutas to create harmonious living spaces. Agricultural traditional practices consider soil (Prithvi), water (Apas), and sunlight (Agni) as sacred, fostering sustainable farming.

Table (b) indicating holistic relevance of Panchabhutas in tackling climate issues:

Elements	Key contributors to climate change	Modern Relevance
Prithvi	➢ Deforestation ➢ Soil erosion ➢ Loss of biodiversity ➢ Land degradation	Addressing soil degradation and habitat loss: Reverence for Earth as the sustainer of life, as taught in Vedic traditions, fosters practices like afforestation and sustainable agriculture. Traditional Indian farming systems, like crop rotation and agroforestry, protecting soil health and reduce carbon emissions. Sacred groves and community-led conservation efforts (e.g., Bishnoi practices) emphasize the importance of preserving land and ecosystems.
Apas	➢ Overexploitation of water resources ➢ Contamination of freshwater bodies ➢ Melting glaciers	Tackling water scarcity and pollution: Ancient water management systems, like stepwells (*baolis*) and tanks (*Eris*), demonstrate sustainable use and conservation of water. Festivals such as Chhath Puja and Ganga Dussehra highlights community responsibility for protecting rivers. Rituals of water worship instil a sense of sacredness, discouraging pollution and encouraging cleanup initiatives (Swachh Bharat Abhiyan).
Agni	➢ Unchecked use of fossil fuels ➢ Wildfires, and industrial emissions	Reducing air pollution and harnessing clean energy: The use of clean energy sources, such as cow dung cakes and herbal incense sticks in traditional households, minimizes air pollution. Controlled use of fire in rituals, accompanied by respect for its purifying properties, discouraging harmful practices (stubble burning). Ancient texts emphasize moderation, encouraging responsible use of natural fuels and renewable resources.

Vayu	➢ Rising air pollution due to industrial emissions, vehicular exhaust, and deforestation	<u>Combating air pollution and promoting forest cover:</u> Planting trees to purify the air aligns with ancient practices like Van Mahotsav and tree worship. Ayurveda's emphasis on clean air for health underlines the need to protect forests and reduce industrial pollutants. Practices like burning herbal mixtures in 'Havan' ceremonies are believed to have purifying effects on the environment.
Akasha	➢ Space and resource overexploitation ➢ Loss of balance in ecosystems	<u>Emphasizing ecosystem harmony and global awareness:</u> The idea of Akasha emphasizes the infinite interconnectedness of all life, encouraging
	➢ Neglecting interconnectedness	global solidarity in addressing climate issues. Traditional Indian philosophies promote minimalism, reducing overconsumption that contributes to environmental degradation. Vedic cosmology teaches respect for the balance of the universe, which resonates with the principles of the Sustainable Development Goals (SDGs).

Panchabhutas and Climate Action:
The Panchabhutas offer actionable insights for restoring ecosystems (Prithvi), adopting renewable energy (Agni), promoting clean air (Vayu), preserving water resources (Apas), fostering community-based solutions rooted in harmony (Akasha), and it advocates for the cultural and ethical shifts by drawing on ancient wisdom to inspire global participation in sustainable practices.

SUSTAINABLE AND BIODEGRADABLE ALTERNATIVES FOR PLASTICS!
According to Statista, worldwide plastic production is 413.8 million metric tons in 2023. Recently at COP29, there was less consensus among countries, on how to solve plastic pollution crisis. The Indian ancient tradition of packaging and preservation with natural products got disturbed especially after industrial revolution where the Indian market was flooded due to mass production of goods. From then the plastics were slowly started replacing traditional packaging. An article from "The Mend" (2023), explores the sustainable ancient packaging practices with natural produce like handcrafted textiles, leaves of sal and banyan trees as food wrappers, potlies (traditional knotted pouch), spices and herbal leaves of turmeric or neem used as preservatives which has antimicrobial properties.

In modern times some companies are getting inspired from traditional packaging and are assisting in making biodegradable and sustainable packages for companies. Some case studies are presented below which highlights on how these ancient knowledge systems are being inspired during modern times.

Ecoville company is revolutionizing in construction sector by producing cost-effective substitute with recyclable plastics thereby by being environment conscious.

Dharaksha Ecosolutions is a Delhi based nature conscious start-up prevents burning of agricultural waste instead it creates biodegradable and sustainable alternatives for packaging material that eliminates the usage of chemically derived Styrofoam.

Envigreen Biotech India Private Ltd produces India's first 100% biodegradable substitute for plastics by manufacturing products that are made from natural starch, vegetable waste, and vegetable oil derivatives. These products are non-toxic to the environment, animals, and plants. Utensils on which the food is served play a strategic role in the evolution of the food and packaging industry.

EdiblePro company is on a mission to provide edible cutlery which are non-plastic, biodegradable, and result in zero waste. This is a new concept where the cutlery (like spoons, forks, sticks, cups and straws) can be eaten after consuming the food or drink as these are prepared with millet-based products. This is manufactured to withstand hot or cold liquids and is suitable for all climatic conditions.

SDGs AND INDIAN ANCIENT KNOWLEDGE
It is crucial to acknowledge that how the traditional knowledge systems are interlinked with global platforms like SDGs that provides scalable solutions that can be adopted in other nations. The details are provided in the following Table.

Table (c) showing Traditional knowledge linked with SDGs

SDGs	Traditional knowledge linked with modern relevance
SDG 6: **Clean Water and Sanitation**	The Jal Shakti Abhiyan revitalizes traditional systems, improving water access and quality. Supports resilience to droughts and groundwater recharge. Example: Stepwells-*Johads,* B*aolis, Rani ki vav, Eris.*
SDG 7: **Affordable and Clean Energy**	The International Solar Alliance (ISA), headquartered in India, draws cultural and practical inspiration from this ethos. Reduces dependency on fossil fuels.
SDG 11: **Sustainable Cities and Communities**	Smart Cities incorporate energy-efficient buildings and water-sensitive planning. Helps cities adapt to climate challenges like heat islands and resource scarcity. Example: Principles of *Vaastu Shastra* and Harappan urban planning.
SDG 12: **Responsible Consumption and Production**	Organic farming initiatives like ZBNF align with sustainable production methods. Minimizes resource depletion and waste generation. Example: Zero-waste philosophy in Ayurveda repurposing herbal residues.

SDG 13: Climate Action	Community-led efforts inspired by the Chipko Movement combat deforestation and climate vulnerability. Contributes to carbon sequestration and ecosystem restoration and builds community resilience.
SDG 15: Life on Land	Sacred groves and wildlife corridors preserve native species and habitats. Protects ecosystems vital for climate balance.

SDG 17: Partnerships for the Goals	Partnerships with local communities and international bodies for reforestation and water management. Strengthens global and local cooperation for sustainable development. Collaborative initiatives like the National Action Plan on Climate Change (NAPCC) integrate traditional knowledge with modern strategies.

CONCLUSION

The challenges the world faces today, especially in the context of environmental degradation and climate change, are multifaceted. Addressing these issues requires understanding their root causes, impacts, and potential solutions rooted in ancient wisdom and sustainable practices. As challenges are interconnected, solutions must address both ecological and societal aspects. India's ancient knowledge systems and cultural practices offer holistic approaches that emphasize harmony with nature, community participation, and sustainability.

By integrating traditional wisdom into modern frameworks, India bridges ancient sustainability practices with global climate goals. This synergy aligns closely with both the SDGs (following the table (c)) and the Conference of Parties (COP) under the UN Framework Convention on Climate Change (UNFCCC) framework, demonstrating how cultural heritage can lead climate action and sustainability globally. India's approach to integrating ancient knowledge systems into COP discussions highlights the power of blending tradition with modern technology.

It is inevitable to quote one of a text from Rigveda (10.117.6), which promotes the idea of selfless coexistence and sharing resources sustainably to address environmental degradation, "*for the man who gives without seeking anything in return, the whole world is his family,"* this should be acknowledged in the wake of disagreements with respect to COP29, especially in lack of consensus among nations on the level of climate finance commitments to be made by developed nations to developing nations.

For further expansion of traditional knowledge systems, it is desirable to partner with funding agencies like DST (Department of Science and Technology) or ICSSR (Indian Council of Social Science Research) to focus on ancient knowledge systems.

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Ancient Practices for Modern Agriculture: Harnessing the Potential of Indian Knowledge System to Address Contemporary Challenges.
Agriculture in Ancient India and its Relevance in the Modern Era

Rajat Kumar Nath,

Introduction:

Agriculture has historical significance with respect to the Indian society. [7]The practice of agriculture can be traced back in ancient civilisations like Harappa, Mohenjo-Daro, Lothal, and the Indus Valley. Megasthenes, the Greek ambassador at the court of the Chandragupta Maurya, reported, "famine has never visited India, and there has never been a general scarcity in the supply of nourishing food". King Ashoka (273 BC – 232 BC) promoted agriculture and veterinary services, the traces of which are found at 'Sanchi'.

Ancient texts such as Varahamihira's *Brhatsamhita,* mention characteristics of animal and treatment of plant diseases. Kalidasha, in his '*Raghuvamasa*' opined that paddy was being grown in the fields of Bengal. The *Arthasashtra* mentions about crops such as *Sali* (Rice), *gudhuma* (wheat), and *sarshapa* (mustard) etc.

Hiuen Tsang, the famous Chinese traveller, recorded that, cereals like wheat, rice and millets and fruits were extensively grown in India.

Hence, since time immemorial, agriculture has been a part and parcel of Indian Culture. [2,3]In the present time, agriculture feeds about 6.4 billion people globally including 1.3 billion in India. [1]Not only does it provide food and nutrition, but also 50 percent of the working population is dependent on agriculture for their livelihood. [5]It contributes 18.6 percent of the national income. In the year 2021-22, the net foreign exchange from the agriculture sector was

20.79 billion USD. [6]During COVID-19 pandemic, where all sectors of the economy negative growth, agriculture exhibited positive growth, acting as a shock-absorber for the ailing economy.

[78]Given the importance of this sector, it would not be an exaggeration to quote India's first prime minister, Pt. Jawahar Lal Nehru, who said, "everything else can wait, but not agriculture".

However, the sector is facing challenges with significant implications at both national and global level. Major challenges, such as, land degradation, water scarcity and its management, genetic erosion, and the incidence of insect pest are analysed here, along with the potential of the Indian knowledge system to address them.

Land Degradation and the Loss of Soil Fertility:

[8]According to the Food and Agriculture Organisation (FAO), "land degradation is a temporary or permanent decline in the productive capacity of land or its potential for environmental management". [9]It is one of the major environmental issues that is faced by

communities worldwide, negatively impacting their livelihoods.[10]Land degradation can lead to the production of poor-quality forage, reduced water availability, increased incidence of disease, high mortality of livestock, and decline in their productivity. The socio-economic consequences include reduced income, increased poverty and growing food insecurity. [11]Around 33 percent of the world's cultivable land has been lost due to soil erosion and pollution in the last forty years. Additionally, land degradation contributes to climate change by releasing carbon dioxide stored in the soil.

[13]In India, about 32 percent of the land is degraded. [12]It has been found that an increase in land degradation by 1 percent could lead to a decrease in agricultural productivity by Rs. 104 per hectare. The extent of degradation varies across regions. [14]In the Chambal area, villages located within the degraded area consistently exhibit low levels of socio-economic development than those which were located outside. [15]Similarly, in the Attappady region of kerala, land degradation has rendered farming economically non-viable and farmers have to depend upon unskilled manual work and government assistance to make ends meet.

Ancient Practices to Address this Issue:
[16]Farmers in ancient time emphasized on crop rotation for improving soil productivity as it helps in enhancing the level of soil carbon and nitrogen.[17]Fallowing was one method of restoring soil fertility where the soil was not used for any kind of cultivation practices during a time period, and the fertility of the soil was naturally restored. Farmers prefer Farm Yard Manure (FYM) prepared during winter as best for soil application. Green manuring was widely used as it helps in improving soil structure, increasing water holding capacity, decrease soil erosion and ameliorating alkali soils. [18] Farmers in Tamilnadu used a mixture of cowdung, urine, milk, ghee and curd, known as "Panchagavya" improve soil health. [19]Similarly, in rural Karnataka, a mixture of fermented cow dung, urine, jagerry, pulse flour, and soil, known as "jeevamrutha" is used to boost soil fertility. [20]The practice of composting was also found in various parts of our country. Compost pits were created to decompose the organic waste, which was then used to increase soil fertility. [21]Rural farmers of Andhra Pradesh applied tank silts to the fields to enhance the soil fertility and water holding capacity. [22]Groundnut shell were used as a soil amendment to the light textured red soils in Anantpur district of Andhra Pradesh to enhance the nutrient content. [23]Sheep penning was another method where a floc of sheep was allowed to stay at a field over-night before shifting them to another patch of the field. The faecal matter and urine from the sheep help in enhancing the nutrient content of the soil. [25]The use of natural minerals was also an age-old practice, where rocks such as zeolite, bentonite and rock phosphate were crushed and added to soil which acts as a source for plant nutrient and improve nutrient management.

Water Scarcity; A growing Challenge for Crop Production
[28]Studies have found that 46 percent of the world's population may be expected to lack the water required for food self-reliance because they do not have enough rainfed and irrigated water source. [29]Water scarcity is expected to rise as the consequences of climate change. It is estimated that with every degree rise in temperature, seven percent of the world population see a 20 percent decline in renewable water sources. [30,31]Ground water is essential for irrigation in 40 percent of the world's agricultural production, but its reserves are depleting across the globe.

[27]Agriculture in India uses about 85 percent of the country's water resources. [26]According to Sir Charles Trevelyan, "Irrigation is everything in India; water is even more valuable than land".

[32,33]As per OECD Environmental Outlook, India would face severe water constraint by the year 2050. The country is already classified as a water stressed (<1700m3/capita) and is moving towards water-scarce (<1000m3/capita). Forty-two percent of the country's cultivable land lies in drought-prone areas, and the frequency of drought set to increase between 2000 to 2049. Several factors contribute to the depleting ground water resources.

[36]To support small holder farmers, many state governments in India made subsidies for installing irrigation facilities using ground water, which has exacerbated the issue of ground water depletion. [37]Additionally, the rice wheat cropping system is a major contributor to ground water depletion. [38]Research has found that Rural poverty can be reduced by 1.54 percent through an increase of one hectare of ground water irrigation for every one thousand rural people.

In this background, efficient rain water management could help alleviate this malady.

Ancient Practices to Mitigate this Challenge:
[39]In the western part of Rajasthan, where the ground water availability is less, kunds/kundis are are for storage of rainwater. Kunds have saucer shaped catchment area at the centre of which a well is situated. [40]A kund having 100 square meter catchment area with 100mm of rainfall could easily harvest 10,000 liters of water. [39]The Apatani system, a wet rice cultivation cum fish farming practice, is an excellent example of water management. In this system, stream water flowing in the hill tops is tapped using earthen channels. Domestic waste is mixed with the tapped water, which is then made to flow through the village. Eventually, the nutrient-rich water is used for irrigation purpose and farming of fish. [39]Eri and kulams are tanks, that were built 1500 years ago in Tamilnadu, to harvest the monsson rains for irrigation and other consumption purposes.[45]These structures also help in recharging the ground water, flood control, soil erosion, and wastage of run-off during heavy rainfall.[46]In the central Himalayan Mountain region, paddy is pre-soaked overnight and then sown for nursery propagation. It helps in good germination and irrigation demand for germination is minimised. Additionally, wet soil is mixed with the seeds of rye (*Brassica nigra*), and are sown in the holes between the stones in the terraces, which helps in reducing the need for water for irrigation [39]In the Great- Nicobar Island, the *Shompon* tribe make bunds in the lower part of the undulating terrain using logs of hard bullet wood. They make extensive use of split bamboos, which serve as channels to collect rainwater in pits known as *jackwells.* [42]Split bamboos are also placed near trees to collect water from the leaves of the trees.[46]Traditional methods of water conservation are cost- effective and can be made using of locally available material.

Tackling Genetic Erosion: Preserving Crop Diversity for the Future
Not only Land and water, the presence of crop diversity is also indispensable for food and nutrition security. [52]But in the present time we are witnessing genetic erosion in crop plants, which is the depletion of genetic variability due to several factors over a particular period of time in a particular location. [53]It is primarily caused due to the substitution of the land races with the improved varieties. Due to the loss of genetic variability, it is becoming difficult to develop new and superior varieties with useful characteristics. Narrowing of genetic diversity may result the complete loss of crop plants. Plant breeding is dependent upon the genetic variation of the cultivated crops and their wild relatives together for further improvements. Genetic diversity is of paramount importance for the survival of the species through adaptation to the biotic and abiotic stress posed by the environment. Plant genetic

diversity is also important for agricultural development with improvement in morphological and agronomic characteristics. As genetic diversity increases, the ability to adapt to the incidence of pest and diseases, also increases within a species.[54]Genetic uniformity is the basis of vulnerability to epidemics i.e. to biotic and abiotic stress. [55]The usage of Indigenous varieties of seeds are found to be more resilient to the vagaries of nature as compared to the hybrid varieties.

Ancient Remedies to mitigate this Challenge:
The practice of preserving crop diversity is deeply embedded in the culture of India. To champion this cause, community seed banks are created and seed festivals are celebrated in various parts of our country.

[56]Community seed banks functions very much like the commercial bank, but here, instead of money, seeds are exchanged. Anyone who is a member of the seed bank is provided with the seeds of the stored food crops. The members sow the seeds and after the harvest of crops, return double the amount of seed to the seed bank. [55]Women farmers in Nagaland created community seed banks to conserve and circulate indigenous seeds. This practice along with access to community farming helps everyone including the widows and others with limited resources toensure food security. The seedbank helps them in learning from each other and bridging the knowledge between generations.

[56]Similarly, seed fairs are organised after harvest of the crop. A seed fair is like a traditional market where farmers besides buying their weekly needs also exchange information related to seed storage techniques along with other sustainable agricultural practices. Seed festivals also help in maintaining the genetic diversity. [79]In the Kandhamala district of Odisha, the Kutia Kondh tribe celebrate a traditional festival called Burlang Yatra every year where the community members, especially women, worship and exchange seeds. [58]In the eastern Odisha tribal hinterlands, seed mothers or 'bihana maa' are on a war footing- identifying, collecting and conserving traditional seed varieties and motivating farming families to use them. They also created community seed banks which pure and quality seed, provides grain during emergencies and maintain local genetic diversity. [61]Tribal and rural families in the Koraput district of Odisha raise food crops using the local land races and have a repository of traditional seed selection practices.[60]In the Jhumia tribe of Tripura, preservation of local seeds for future crop is considered as a spiritual responsibility.

Insect Pests in Agriculture: Challenges and Ancient Solutions
[45]The incidence of climate change and the introduction of transgenic crops has exacerbated the problem of pest incidence. [63]Insect pests may be destroying 18 to 20 percent of the world's crop production amounting to about 470 billion USD and the losses are higher in the developing countries of Asia and Africa. [64]The fall army worm has infested crop all over the world including USA, Brazil, Ghana, Zambia and South Africa.

[45]Indian agriculture losses about 36 billion US dollar due to the incidence of insect pests. [45]The

losses occurred in the post-green revolution era is more as compared to the pre-green revolution period. [68]Overall, the losses increased from 7.2 per cent in early 1960's to 23.3 percent in 2000s. [9]The maximum losses occurred in cotton (18 to 50 percent), followed by sorghum and millets (3.5 to 30 percent), and maize (5 to 25 percent) and oilseeds (5 to 25 percent).

[70]A study in Karnataka have shown that, following the invasion of fall army worm, the cost of cultivation for maize have significantly increased from Rs. 63,283 to Rs. 69,747.00. [71]The outbreak of *Spodoptera litura* on soyabean in the kota region of Rajasthan has caused a loss of Rs. 300 Crore. **[72]**Traditional insect pest management practices India have assisted in mitigating this issue to a great extent.

Traditional practices for managing insect pest
[73]In the southern peninsular region of India, in Kanyakumari, farmers use lime, fly ash, and plant species such as *Azardirachta indica (Neem) Aloe barbadensis(Aloe Vera)*, *Coleus amboinicus(Ajwain)*, and *Pongamia pinnata (Karanja)* as deterrent materials against pest of paddy and coconut plantation. [72]In the North-East, to maintain seed health from pest and diseases, healthy seeds are collected after harvest; hung over fire for constant smoking; mixed with ashes of fire wood and then neem seed powder is mixed before storing them in a seed bin. [75]In maize, aromatic plants such as citronella grass, lemon grass, peels of pomelo are used in maize granaries to prevent the attack of maize weevil. To manage pest and diseases of rice, oak tree bark is grounded and placed over the source of irrigation canal which prevents pest such as brown plant hopper. Fermented wine residue, made up of millets is also used along with irrigation water against leaf folder and blast of rice.

For controlling nematodes in spices and vegetables such as, ginger, chillies, turmeric and tomato, intercropping is done with *Chrysanthemum coronarium*, and *Tagetus erecta* (marigold) and leaves of these plants are mixed with soil for nutrient enrichment of crops. [76]Crop residues such as shell, ash, animal products like cow urine, cow dung, milk, and minerals such as red earth and sand are used for crop protection and nutrition. In some regions coconut oil is mixed with black gram and green gram to save them insect pest. In stored grain of pulses, Bruchid attack is a common problem and to overcome this, red earth treatment of pulse crop is done in a 1:1 ratio, followed by sun drying for 2 to 3 days.

Conclusion:
Ancient agricultural practices in India embody a profound knowledge base for solving the present challenges. Practices such as intercropping, crop rotation and the use of organic inputs like panchagavya, jeevamruta, tank silts, compost, and FYM effectively address the issues of land degradation and loss of soil fertility. The challenges of water scarcity could be addressed through strong community participation and the use of various water harvesting structures. Innovative practices such as Apatani system of rice cultivation, bamboo drip irrigation, pre- soaking of seed, and the creation of jackwells to harvest rain water are particularly noteworthy. Community seed banks and the celebration of seed festivals played a great role on preventing genetic erosion and preserving traditional land races. To effectively curb the menace of insect pest, practices such as storing of grain in bamboo basket and use of aromatic and medicinal plant parts and their extracts were widely employed.

While these practices providevaluable lessons in sustainable agriculture, integrating them with modern agricultural practices can offer holistic solutions to contemporary challenges like climate change and resource degradation. There is a need to explore, revive and adapt these ancient techniques to ensure food security and ecological sustainability for future generations. India's rich agricultural heritage can serve as a panacea for creating a resilient and sustainable farming future.

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Indian Knowledge Systems:
Relevance of Ancient Practices for Contemporary Problems

Teegala Shruthi

"We owe a lot to the ancient Indians, teaching us how to count. Without which most modern scientific discoveries would have been impossible"-Albert Einstein

This quote emphasizing the relevance of Indian knowledge system with contemporary mathematical advancements and development.

Lord Krishna in Bhagavad-Gita tells to Arjuna the following verses:

4.33: O subduer of enemies, sacrifice performed in knowledge is superior to any mechanical material sacrifice. After all, O Parth, all sacrifices of work culminate in knowledge.

4.37: As a kindled fire reduces wood to ashes, O Arjun, so does the fire of knowledge burn to ashes all reactions from material activities.

4.38: In this world, there is nothing as purifying as divine knowledge. One who has attained purity of mind through prolonged practice of Yog, receives such knowledge within the heart, in due course of time.

This is the symbol of India's commitment towards Indian knowledge system which is an uninterrupted flow of the Ganges River, from the Vedas to Sri Aurobindo.

The knowledge system has built over ages by the sages, philosophers, scientists, and scholars of ancient India not only contributed to the world intellectual system but also provide valuable solutions for contemporary challenges.

Indian Knowledge System Relevance with Environment Sustainability

One of the most pressing contemporary issues is the degradation of the environment, manifested in climate change, deforestation, pollution, and loss of biodiversity. Indian knowledge system provides perspectives and practices which help to mitigate these challenges.

The concept of Panchamahabhutas (the five elements-earth, water, fire, air and ether) in the ancient texts exemplifies the interconnectedness of all forms of life and provides valuable lessons for the current environmental policies and sustainable practices.

The ancient Indian tradition of sacred groves or devara kaadu offers a model of preservation efforts. The sacred groves are forests dedicated to deities were preserved as sacred spaces where people refrained from cutting down Tressa and disturbing wildlife. The concept of sacred groves illustrates the deeply ingrained ecological consciousness that could inspire modern conservation efforts.

A Verse from Rig-Veda Says, "Thousands and Hundreds of Years If You Want to Enjoy the Fruits and Happiness of Life Then Take Up Systematic Planting of Trees." which stressing the importance trees in the contemporary society to provide fresh air, fruits and vegetables to the increasing population.

In The Arthasastra, Kautilya Suggests the need to develop Abhayāranya or Abhayavana, Forest and Animal Sanctuaries, Where Trees and Animals Would Both Reside Free from the Fear of Slaughter. Kautilya Also Prescribed the Post of a Forest Superintendent and Penalties for Poaching and Causing Damage to Forests, Especially Productive Ones provides which giving insights to contemporary forest officials and creating biosphere reserves, national parks and wild life sanctuaries.

In The Words of the Ancient Immemorial Indian Poet, Kalidasa:" The Himalaya Is a Great Devatatma, A Great Spiritual Presence, stretching from The West to The Eastern Sea Like a Measuring Rod to Gauge the World's Greatness." stressing the importance of protecting mountains which help in climate change mitigation and protection of flora and fauna endemic to it.

The Upanishads contain detailed descriptions of horses and cattle. The Garuda purana contains life-histories of fishes and turtles which provides information about their origin of life, organic evolution and environmental science.

In Yajurveda, a prayer reads, "Give us cows that have abundance of milk, bulls that have full vigor and vitality, horses that can face challenges of any enemy, a ruler who is courageous and fearless, intellectual son and a wife who can take good care of the young and old" which exemplifying the importance of conservation of animals.

The Indian mythology says the different animals like elephant, tiger, lion, cow, monkey etc., related to different gods and goddess which inculcated the nature into spirituality.

Indian Knowledge System – Agriculture

"If farmers give up farming, even the Rishis (Sages) cannot afford to survive."- Thirukkural (300BC) this sacred verse from an Indian ancient literary text illustrating the importance of farming.

Indian climate is a monsoon climate where most of the agriculture depends on monsoon.so predicting rainfall and weather pattern with artificial intelligence currently had its roots in KRISHI-PRASHARA AND BRAHMA-SAMHITHA BY VARAHAMIHIRA used the position of sun and moon and lunar mansions in predicting the seasonal rainfall help in cultivation for getting good yield.

The law-giver Manu recommended the severe punishment for the adulteration of seeds resembling the need of strict punishments to the duplicate seeds and providing a framework to a lot a department for it. In ancient days seeds preserved with ghee, rice flour, cow dung and stored in beehives, earthen pots, ashes and fibers giving solution to the contemporary challenges like pollution due to use of chemicals as preservatives.

Ancient texts like the Rigveda highlight the importance of maintaining soil fertility and water conservation through natural means, such as crop rotation, composting, and the use of natural pesticides. These practices, though not widely followed today, offer sustainable solutions to the overexploitation of resources in contemporary agriculture.

According to Parashara, "crops grown without manure will not give good yield". In the Agni Purana, application of 'excreta of sheep and goat and pulverized barley and sesame allowed to be soaked in water for seven nights' is recommended to increase flowering and fruiting of trees offering the organic farming techniques contemporary farmers.

Kunapajala is a fermented liquid manure mentioned in ancient Indian texts such as Vrikshayurveda and Lokopakara provide solution to the pollution due to using pesticides and fertilizer. PANCHAGAVYA works as bio fertilizer which providing alternative to chemical fertilizers and pesticides.

Rig Veda mentions irrigation of crops by river water through channels as well as irrigation from wells provide information about the efficient utilization of river resources. Artha-shastra of Kautilya refers to sluice gates of tanks and mentions that "persons letting out the water of tanks at any other place other than their sluicegate shall pay a fine of six Panas; and persons who obstruct the flow of water from the sluicegate of tanks shall also pay the same fine." It is further stated that "the water of a lower tank, excavated later on, shall not irrigate the field already irrigated by a higher tank and the natural flow of water from a higher to a lower tank shall not be stopped, unless the lower tank has ceased to be useful for three consecutive years." which give insights to the resolution of interstate water disputes through strict regulation.

Indian Knowledge System-Mental and Physical Health

The Bhagavad-Gita, the yoga sutras of Patanjali, the hatha yoga paradipika mentions about yoga which helps in reducing stress, improving flexibility and enhancing overall mental clarity. We are in the phase of growing mental health issues like stress and anxiety where YOGA a gaining popularity as great solution as it focus on mindfulness and breath control offer practical tool for self-regulation and emotional balance. Practices like Dhyana (meditation) and Pranayama (breathing exercises) are recognized for their ability to reduce stress and improve mental clarity.

The concept of Santosha (contentment) in Yoga can serve as a remedy for the modern malady of consumerism and the incessant desire for more. This practice encourages individuals to focus on gratitude and inner peace rather than external possessions, offering a much-needed antidote to the pressures of contemporary life. Mass consumption requires mass production which ultimately leads to exploitation of resources. This concept of santosha in yoga inculcate the simplicity by telling inner beauty and peace is more important than the outer decoration with things which require more energy and resources.

Obesity is one of the pressing concerns of the world but India's concept Surya namaskar incorporates a combination of breathing, synchronized movements and yoga poses which help in coordinating body and breath ultimately leads to reduction of weight and leads to mental happiness.

Ayurveda focuses on the balance of body, mind and spirit. Ayurved offers personalized treatments to enhance mental and physical well-being. It enhances the balance, natural remedies and preventive care. Ayurveda states that every person is unique and the health of that individual is a state that when a person maintains a balance between vata (air and ether), pitta (fire and water) and kapha (water and earth) composition within their body. The moment the balance got disturb at the same moment disease is born.

All Ayurvedic treatments are oral or external, change in lifestyle, change in diet, detoxification designed to provide necessary strength to the body to cure itself.

Ancient Education System in Solving Contemporary Problems

Ancient Indian education system flourished long before the advent of formal schooling system in the west, was deeply rooted in values of holistic development, moral responsibility and intimate connection with the nature.

Education in the Gurukul system fosters the complete individual, encompassing the mental clarity, emotional intelligence, physical health and spiritual insight which help for individual development and independent in decision making. In this system wide array of subjects thought which emphasized on the personal responsibility and self-awareness which develop the person individually even though not academically proficient but also morally upright, emotionally balanced, and physically health.

Gurukul system is great inspiration to today's world which focusing only on developing skill which require to job market and education became a commercial activity without any social and collective responsibility.

Ancient education system focused on meditation, yoga and mindfulness which is not present in current education system which focusing only on materialistic things but not the mental development and emotional balance. In modern times we often see the rise of mental issues like stress, anxiety and depression due to the fast-paced, competitive and isolating nature of contemporary times. Meditation offers a powerful counterpoint to all these mental problems.it never seen as an extracurricular activity but as integral part of the education designed to help students cultivate inner peace, self-control and resilience-qualities that are urgently needed to navigate the pressures of modern life.

In contemporary world where the pursuit of of individual success often overshadows the collective well-being but the texts like Bhagavad-Gita and Mahabharata teach the students the importance of virtues such as truth, compassion, non-violence, humility, and service to society. These teachings not only seek personal enlightenment but also to work towards the welfare of others and the larger community.

The modern society just focusing only on economic and technological outcomes without concentrating much on the ethics, morals they follow in the process of getting them. But the verse Dharmo Rakshati Rakshitah mentioned in several texts like Manu smriti, Mahabharat, Ramayana explain about the righteousness should include these types of teachings in the curriculum which guide the students to achieve things in righteous path and follow the principle of Dhrama.

Encroachment of forests causing deforestation, human-wild conflict, increase in temperature, pollution of air, species extinction in contemporary world is a stressing problem. The phrases like Vruksho Rakshhati Rakshitah mentioned in our ancient scriptures showcasing the importance of trees and their protection must inculcate in the school education like environmental studies, ecological studies can make students closer to the environment from the early age. With rising concerns about youth unemployment, social isolation, and skill gaps, the ancient Indian education emphasis on community learning can offer the students not only gain academic knowledge but also practical knowledge, critical thinking and develop practical, social, and emotional skills which contribute to the society in a better manner.

The modern standardized educational system preferring one-size-fits all curricula demotivating the students as there is no way to them to nurture their own natural skills and talent. But if we follow the ancient education system emphasize individual learning paths and self-discovery. In gurukul system, students encouraged to pursue knowledge that resonated with their inner interests and inclinations.

The concept of Vasudeva kutumbakam mentioned in Sanskrit texts and Hindu Maha Upanishad must be taught to the world as we are seeing the raising wars, territorial and resource sharing issues in the world which can solve by discussion also. If we include this concept in curriculum encourage people to be more compassionate and empathetic towards others.

Vedic mathematics helps in faster and accurate mental calculations which assist in budgeting, banking and finance in today's world. Sushruta Samhita provides a wide range of surgical procedures and medical topics are helpful in solving the contemporary health issues. Charaka Samhita is the oldest and the most authentic treatise on Ayurveda. These types of texts must be included in part of education which will provide greater solution to the arising problems.

Our ancient knowledge and practices thought us many techniques like varugulu for reducing food wastage, leaves like Tulasi, neem use to treat many infections like cough, cold and flu, turmeric use it as an antibiotic is our duty to put our ancient knowledge into practice and preserve it to the future generations

Indian Knowledge Systems:
Relevance of Ancient Practices for Contemporary Problems

Suadath. V

"Back in my days, things were pretty simple and easy". Most of us have grown up listening such statements from our elders, often accompanied by stories of a seemingly uncomplicated past. The young people who are immersed in the conveniences of a rapidly growing world, we may have ignored these reflections, thinking that the present, with all the technological advancements, was inherently better than the past. However, as we evolve and navigate the complexities of the contemporary life, we begin to understand the meaning of what our ancestors were trying to convey to us. The increasing complexities of modern everydayness have urged many of us to revisit the history of Bharat and explore why those certain periods are referred to as the "Golden Era". Such ancient periods are celebrated not only for their material advancements but also for the persisting relevance of their leaders and the values they held. Such retrospective journey highlights the importance of understanding the Indian Knowledge System (IKS).

The Bharatiya perspective, deeply rooted in the principles of sustainability and human wellbeing treats knowledge as the ultimate ideal in all diverse traditions. The ministry of education, Government of India narrates the Indian Knowledge system as a comprehensive approach that encapsulates the 'Indian way' of doing things and solving problems. This emphasis on holistic understanding highlights India's rich cultural and intellectual heritage as very relevant in addressing the modern day problems (2023).

The Indian Knowledge System is ingrained in our culture, and it includes *Jnan* (Knowledge), *Vignan* (Science), and *Jeevan Darshan* (Life Philosophy), all of which have emerged from experiences, experiments, observations, and rigorous analysis (2023). As we all know, the rich culture of the ancient period was passed down to subsequent generations in a variety of ways. We had *Vedas, Puranas, Upanishads*, artistic depictions, oral history etc. All Indians are somewhat aware of our ancestry, albeit not fully. We now think and feel differently about our country, its culture, and history because of the propensity to follow current trends and assume that western culture and ideas are superior. The expansion of the Indian knowledge system is the only method to educate ourselves about the significance of our historical remembrances and their rich values. Since we have traditional roots in every subject we are developing and are finding it challenging to handle several things at once, this work may be completed with ease. Our current goal should be to integrate and incorporate traditional knowledge into modernity.

Every Indian child found learning about the Indus Valley civilizations, including the Harappa and Mohenjo-Daro cultures, to be incredibly fascinating in history courses. We most likely started by doing it in order to comprehend our ancestry. Therefore, education should be the primary field in which the old knowledge system is incorporated. Every kid in our nation has the chance to receive at least a primary education since it is a fundamental right and is seen as sacred and significant. The modern educational system relies heavily on technology and is quite sophisticated. As a result, the concept of the *guru-sishya* connection has undergone significant

transformation. The meaning of the ideals of self-efficiency, respect, and shared learning changed. Additionally, when we study or even do advanced research, we frequently looks into modern challenges and concerns and come up with temporary answers. This is why traditional schooling concepts and the Guru Kul system become significant. However, it might be challenging in any profession to embrace the old customs as they are in the twenty-first century. Therefore, we must combine the best qualities of the past and modern.

This procedure has been carefully outlined in our government's New Education Policy-2020 (NEP). With a distinct course on the Indian knowledge system itself, it guarantees that the integration should adhere to the scientific method from school to higher education curricula in all disciplines. It is very grateful to have first-hand experience and practical understanding of the customs. To successfully complete this process, NEP has planned a number of activities, such as identifying tourist destinations for students to visit under "*Ek Bharat Shresta Bharat*," promoting languages, arts, and culture, requiring credit components for IKS, regional courses, collaborations with other nations, etc. This can result in more sophisticated conceptions of the present and the future as well as a more inclusive knowledge of our nation and its traditions. In the modern educational system, the idea of online learning is unavoidable. Therefore, it is possible to make our traditional knowledge accessible to the world by offering courses that are in line with our contemporary digital learning platforms, such as SWAYAM or NPTEL (2023). Successful examples of incorporating traditional knowledge into the contemporary practical world include programs for vocational schools, additional skills acquisition programs (ASAP) etc.

One of the fields in which the Indian traditional knowledge system excels is mathematics. Our ancient mathematicians, such as Brahmagupta, Bhaskara, and Srinivasa Ramanuja, made substantial contributions to the fields of algebra, calculus, and the idea of zero. The groundwork for modern science and technology has been laid by this. We may use these concepts into contemporary scientific discourse, computational techniques, cryptography, computer science, etc., even if they may appear to be only foundational. The present trend of teaching kids to use abacuses may be viewed as a step toward understanding the value of mathematics and the profound contributions it has made to our nation.

The adage "health is wealth" is quite ancient and still holds value in our everyday lives. It originated from the experiences of our forefathers. In recent years, Indians have been more concerned about their health. We are really concerned about our mental and physical health, and lifestyle. As we have dealt with pandemics and emerging illnesses, we have discovered several survival and health strategies that our people have employed in the past. Ayurveda has always provided a complete well-being, which is what people now desire despite the daily advancements in contemporary scientific medications. The primary causes of today's health problems are poor diets, an imbalanced work-life schedule, and lifestyle choices.

Modern medicine undoubtedly has remedies for PCOD, obesity, excessive stress and anxiety, and other chronic ailments. We now have access to modern technology, diagnosis tools, vaccines, medications, and even DNA sequencing technologies, but as people look for long-term cures with little or no side effects, they are beginning to lose faith in the processes. Therefore, combining Ayurveda's individualized preventative approach with modern medicine to supplement it is the simplest way to address such problems.

It can support the development of medical systems that emphasize individualized treatment and mental-physical balance. The efficacy of Ayurveda and its many concepts—*Vata, Pitha,*

Kafa, doshas, etc.—can be analysed by new scientific techniques that will reduce the scepticism that many already have. Traditional therapeutic methods have impacted not only Ayurveda but also the new wave of natural remedies and alternative treatment systems in India, including naturopathy, herbal remedies, acupuncture, needle therapy, *hijama* etc. Traditional knowledge also affects the prevalence of water births, home births, and at-home postpartum care. However, without the right guidance or monitoring, it can be extremely harmful to both the mother and the kid, according to the medical professionals. Therefore, if we can properly integrate traditional medical knowledge with modernity, we can address all of these concerns. Our educational institutions must thus encourage students to study Ayurveda or traditional medical practices, research, and aspects of it.

An essential component of good health is physical activity. These days, we are accustomed to a wide range of workouts. We have undergone several changes, from engaging in everyday chores to having personalized exercise regimens. However, we didn't recognize yoga as a life practice until much later, but it was always a part of our tradition. The many "*Asanas,*" breathing techniques, and meditation offer a potent and revitalizing remedy for both mental and physical ailments. It benefits people's general well-being. As a result, it is increasingly accepted as "exercise" in addition to other activities. Grateful that people are adopting the traditional Indian practice in their daily lives and that it has drawn interest from all across the world. Because there are so many yoga centres, instructors, and students studying it from an early age, it has also created a lot of job prospects. However, because of the divergent views of the current age, yoga frequently loses its spiritual components when it is adapted into the modern world. Therefore, it is crucial to teach and practice yoga with the utmost seriousness rather than viewing it as a simple physical exercise in order to avoid total commercialization from its traditional origins and to retain its spiritual and cultural importance.

Problems resulting from intolerance amongst individuals with various identities are another urgent topic that the world is currently concerned about. Regardless of color, religion, caste, gender, or ethnicity, the problems we are currently confronting have demonstrated that, as humans, we are losing our tolerance, respect, and camaraderie. However, we overlook what our forefathers taught us about "Dharma," or "righteous duty." The principles of any religion encourage values, obligations, and a way of life rather than intolerance (2024). Therefore, if people can better grasp the traditional transcripts with appropriate interpretations, the problems may be eliminated. The same idea may be used to rule and governance.

We are one of the world's largest democracies, therefore upholding our basic principles is crucial to ensuring that everyone receives justice. The lessons learned from ancient Indian administrations can help one become a fair leader who prioritizes the welfare of his people. India needs a solution to its many political and social problems in order to maintain its democratic ideals. Some of the principles are subject to modification carefully to avoid further complications. For instance, the methods of punishment used in past cannot be used now as they could be incompatible with the concept of human rights. Therefore, we must work to determine which aspects of each dynasty may be applied to improve and secure the Indian socio-political system.

The Indian citizens has long held the belief that the rules of the cosmos are real. We have always considered the sun, moon, planets, and stars while making decisions. Indians are greatly influenced by astronomical knowledge as they believe it to leave the house, to make the most important choice of their lives etc. Even the current age believes in astronomical insights we have online astronomers, apps, and other resources. This shift may be further supported by

incorporating popular conventional and modern notions of cosmos and celestial bodies. The sustainable perspective of the planet and its elements can also be fostered by the Vedic understandings of the cosmos as an interrelated organism. Deeper space exploration from India may also result from the contributions of myths like Aryabhata on cosmology, time calculation, etc. To make it a huge success, the focus should be on fusing cutting-edge technology with historical knowledge.

Another significant aspect of human existence is social life. We want to succeed in society without sacrificing our humanity. The ancient way of life has begun to disappear in many ways as people have begun to move into metropolitan areas. Nowadays, the level of anonymity and alienation has increased due to the growing flat life in cities. However, we know from the ancient era that people built societies by farming, hunting-gathering, living in communities, and supporting one another. Naturally, there were disputes and problems between them as well. However, the objective was to advance society as a whole. Nowadays, the way we strive for our personal growth and the advancement of our society has become so complicated that we are unable to strike a balance, destroying relationships, preventing communication, and not even being aware of the problems in our neighbourhood.

In order to preserve the "*Arsha Bharata*" culture, which offers peace and harmony as the objectives, we are being urged to comprehend and practice ideals such as "*vasudaiva kudumbakam," "athidi devo bhava,*" and others in our daily lives.

The modern generation may find these philosophical concepts odd because they have diminished significantly in the modern day. Many significant values, ethics, and morals have been lost from our culture as a result of our growing reliance on social media and other contemporary ideals while leading busy lives. We have a rich philosophical heritage that includes elements of Buddhism, Jainism, and Vedanta etc. Our ancient beliefs contributed concepts like ethics, etiquette, and non-violence, which subsequently proven to be effective strategies, even during the Independence War. In the current situation, everyone may adopt the rooted effect of limitedness and awareness into their lives to counteract the difficulties of prejudice, environmental challenges, materialism, etc. It is necessary that one might follow certain components of the traditional knowledge system in a pragmatic and systematic way to achieve practical answers. These answers will also provide solution to another persistent issue on sustainability.

We are familiar with sustainable development goals. We are attempting to do it even on a worldwide scale. Thinking that the world is for everyone as its resources is the foundation of sustainability, particularly in the context of the environment. This will make us more considerate and less selfish in our current treatment of the environment. That is also what we are learning from our old wisdom. It falls under the age-old concept of "*sampurna*," or completeness. The old understanding is to refer earth as a mother goddess, and it's other elements—fire, air, and water—should be treated with the same respect.

If we can match native sustainable knowledge with technology advancement, the Indian agriculture industry may flourish and become one of the biggest contributors to the country's economy. Crop rotation or water collection like in the past also might work wonderfully now that many people are farming organically. *Vastu-Shastra* is still widely used in many construction settings, which will greatly improve our ability to create environmentally friendly structures.

The concept of conserving forests or groves according to local beliefs may also be used as an illustration of environmental care. These concepts may be disseminated internationally during climate change conferences to serve as a paradigm for safeguarding our ecology. Another effective example of it can be the Chipko movement where people hugged trees to protect them in 1973, which included beliefs about humans and nature into the worldwide environmental advocacy process. Additionally, while modern civilization is heavily reliant on technology, we may employ historic knowledge to develop renewable energy projects that are appropriate for the local areas.

The complexity of the modern world arise from shifts in our ideas, values, and lifestyles, which are said to be the consequence of critical thinking yet are not a recent development. Critical inquiry is the foundation of all laws, the torch for all knowledge systems, and the appropriate approach for all actions, according to Kautilya's *Arthasashtra*. Therefore, if done correctly, integrating old knowledge systems cannot go wrong. It is therefore not about thinking or feeling critically about everything, but rather about having less awareness of and faith in the goodness of the past, which is based on the current knowledge system.

All we have to do is learn about it and brush the dust off the pages. Our perspective and how we view the world around us will shift in a constructive and long-lasting way once we begin doing that. Then even if we are motivated to develop cutting-edge technology, they will be applied for the benefit of everybody rather than just the market values.

In conclusion, we need to comprehend four concepts in order to employ ancient knowledge systems to tackle the problems of the present era: accommodation, assimilation, integration, and cooperation. We only need to make the most of the plethora of resources available to us so that we may learn from them. Drawing on both traditional knowledge and contemporary inventions, we will address problems by offering solutions that are inclusive, sustainable, understanding, and considerate of all living things in our nation, ultimately guiding it toward prosperity.

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Indian Knowledge Systems:
Relevance of Ancient Practices for Contemporary Problems

Sudeshna Ghosh

The Indian knowledge system (IKS) is a systemic and structured approach to transmit knowledge from one generation to the next. It encompasses a rich and diverse array of traditional practices. Philosophies and sciences that have been developed and refined ones in thousands of years. It is a process of knowledge transfer rather than just a tradition which have been rooted in the Vedic literature, Upanishads, Vedas and Upvedas and it rescues as a foundational principle recognised by the National Education Policy. The core components of Indian Knowledge Systems are – knowledge, sciences and philosophies of life along with traditional practices. These systems offer valuable insight and solutions to several contemporary challenges and problems; which briefly includes – Ayurveda, Yoga, Vastu shastra, Astrology (Vedic), Sanskrit and other various Indian Languages, Indian Mathematics, Traditional Indian Agriculture and traditional system of medicines (siddha medicine).

The relevance of ancient practices for contemporary problems like anxiety, stress, depression, etc. lies in their holistic approach which helps in integrating physical, mental and spiritual well being. It also includes environmental sustainability, healthcare and medicines, social and economic development, education, personal growth, technology and natural remedies as well as innovations. It also provides personalised and tailored solutions for individual needs keeping the diversity in mind.

AYURVEDA: This ancient Indian system of medicine offers valuable solutions to contemporary health problems such as mental health, chronic diseases, infectious diseases, lifestyle disorders, geriatric care and women's health. Ayurveda has been a cornerstone of Indian culture and healthcare for over 5000 years. This holistic approach to health and wellness emphasizes the interconnectedness of the body, mind and spirit and offers an unique and personalised approach to medicine. The ancient system of medicine is based on the concept of each individual being unique with their own distinct constitution and characteristics. Ayurveda recognises that the natural environmental diet, lifestyle and mental state all plays a crucial role in maintaining health and preventing disease.

The three fundamental principles of Ayurveda are the three doshas: 'Vata', 'Pitta' and 'Kapha'. These doshas are responsible for maintaining the balance of the body's physical and mental functions. Vata is associated with movement, communication and creativity; Pitta is associated with metabolism, energy and transformation; Kapha is associated with structure, stability and nourishment. Each individuals have a different combination of these three doshas making their constitution and characteristics different from one another.

Ayurvedic practitioners use various diagnostic techniques to assess an individual's health and identify their imbalances. These diagnostic techniques include pulse diagnosis, tongue analysis and physical examination which are also known as 'nadi pariksha', 'jihva pariksha' and 'sharir pariksha' respectively. Based on the diagnosis, the practitioner develops a personalised treatment plan which may include 'Ahara Chikitsa', 'Dravyaguna' and 'Panchakarma' or simply dietary therapy herbal medicine, detoxification and rejuvenation.

Ayurveda addresses the physical, mental and spiritual aspects of health, promoting overall well being. It tailors treatment approaches to an individual's unique constitution and health needs. It uses natural remedies and non – invasive techniques to promote health and present disease.

It helps in keeping the mental health of a person in control by few crucial steps such as stress management, wherein ayurveda provides natural remedies and lifestyle modifications to manage stress, anxiety and depression. These symptoms can also be alleviated by the use of ayurvedic herbs like 'Ashwagandha', 'Brahmi' and 'Ginkgo Biloba'. Sleep disorder is another core factor which leads to deterioration of mental health and insomnia is a cause of depression among the younger generation. This can be controlled by yoga, meditation and relaxation techniques as they increase sleep quality. Not only the mental health, ayurveda also helps in checking and regulating chronic diseases like diabetes and hypertension. Ayurvedic herbs like turmeric, cinnamon and gymnema helps in regulating blood sugar levels whereas arjuna, hawthorn and coleus reduce blood pressure.

In modern times, ayurveda has gained recognition worldwide for its holistic approach to health and wellness. Many people are seeking alternative approaches and healthcare and Ayurveda offers a unique and personalised approach to medicine. Additionally ayurveda emphasis on natural remedies, diet and lifestyle modification which resonates with the growing interest in sustainable living and environmental conservation. Ayurveda's timeless wisdom and principles can serve as a guiding light in promoting health, wellness and maintaining balance in body, mind and spirit.

YOGA: Yoga has been a source to transformation, growth and healing for countless individuals. This ancient practice is more than just a physical exercise or a set of postures, rather it is a holistic approach to living, that weaves together body, mind and spirit. Yoga was originated in ancient India, where it was considered a sacred path to self-discovery and enlightment. The word yoga comes from Sanskrit root "yuj" meaning "to unite" or "to join" and that's exactly what yoga does. It unites our fragmented selves, bringing together our physical, emotional and spiritual aspects into a harmonious whole. Yoga is built around eight core limbs or principles that provide a frame-work for living a balanced and meaningful life. Those limbs are as follows:-

1) Yamas : Universal ethics that guides our relationships with others.
2) Niyamas : Personal observances that cultivate self-discipline and self-awareness.
3) Asanas: Physical postures that awaken our body's potential.
4) Pranayama : Breath work that calms the mind and energizes the body.
5) Pratyahara   : Sense withdrawal that helps us focus inward.
6) Dharana : Concentration that quiets the mind.
7) Dhyana : Meditation that connect us with our deepest self.
8) Samadhi: Enlightment that reveals our true nature.

There are plenty of benefits of yoga in our daily lives which includes increasing flexibility and strength, reducing stress and anxiety, improving mental clarity and focus, maintaining emotional balance and well-being and helping in spiritual growth and connection. Yoga postures stretch and tone our body. Yoga breathing and meditation calms our mind. Yoga also enhances our cognitive functions. It cultivates self-awareness and self-acceptance and it also deepens our connection with ourselves and the world.

Yoga is for everybody, regardless of age, size or ability. We can practice it anywhere be it home, studio or even outdoor. While practicing yoga we should listen to ourselves and our body. We need to honour our body and our limits and modify or rest when needed. We should commit to it as a regular practice; even if its just for few minutes in a day.

In the recent times physical fitness and postural illness have peaked due to the changing habits and our current lifestyles. Yoga serves as a natural remedy for that and it might as well

completely cure all the aforementioned postural problems. Yoga is a journey and not a destination. It is a path that winds through the landscapes of our body, mind and spirit revealing new vistas and depths at every turn. As we embark on this journey we need to always remember that yoga is a practice, not a performance. It is a gift and waiting to be unwrapped and enjoyed in every moment.

VASTU SHASTRA: The ancient Indian science of architecture has been a cornerstone of traditional Indian building practices for centuries. The holistic approach of designing and constructing buildings emphasizes the interconnectedness of human beings, nature and the built environment. Waking up each morning in a home that feels alive, vibrant and filled with energy; living in a space that nurtures your body, mind and inspires us to live our best lives is what vastu shastra promises us. It is not just a set of design principles but holistic approach to creating spaces that promote harmony balance and wellbeing. Vastu shastra is rooted in the belief that our surroundings have a profound impact on our lives. It recognises that every building every room and every object has a unique energy signature that influences our mood, our health and our happiness. It is based on principles which are simple and profound; those principles are as follows:-

1) Orientation: Buildings should face the rising sun embracing the light and energy of the East.
2) Layout: Rooms and spaces should be arranged to promote flow, harmony and balance.
3) Propositions: Buildings should be designed with proportions that resonate with nature.
4) Materials: Natural materials should be used in construction to promote sustainability and well-being.
5) Energy flow: Buildings should be designed to facilitate the free flow of energy (prana).

Vastu Shastra offers a wealth of benefits for modern lives; such as sustainable living, mental well-being, better physical health, productivity and creativity, community and connection. Vastu Shastra promotes eco-friendly building practices, reducing our carbon foot print and environmental impact. It creates spaces that promote relaxation calmness and joy while reducing stress and anxiety. It designs buildings that maximize natural light and ventilation boosting our immune system and overall health. It also inspires innovation and imagination, fostering a more productive and fulfilling work. It also promotes social connection and community engagement, nurturing our relationships and sense of belonging. It is not just a design philosophy rather it is a way of living in harmony with nature and ourselves. By embracing its principles, we can create spaces that nourishes our body, mind and spirits fostering a more balanced, joyful and fulfil life.

SANSKRIT AND VARIOUS OTHER INDIAN LANGUAGES: The various languages of India hold immense value and importance and also relevance for addressing contemporary problems due to their rich cultural heritage, linguistic nuances and philosophical insights. Sanskrit texts like the vedas, upvedas and upanishads offer holistic perspective on health, wellness and sustainability encouraging a balanced life style. Ancient sanskrit texts emphasis the importance of living in harmony with nature promoting eco-friendly practices and conservations. Sanskrit scriptures like the Bhagavat Gita and Patanjali's yoga sutras provide insights into mental health, stress management and emotional balance. These ancient texts also offer timeless wisdom on morality, ethics and personal growth, helping individuals navigate complex modern issues.

Not just Sanskrit but also other languages like Tamil, Malayalam, Telugu and Kannada preserve traditional knowledge, folklore and cultural practices which offers us unique perspective on local challenges. Indian languages help in preserving cultural heritage,

promoting diversity and inclusivity in the face of globalization. Many Indian languages have a rich tradition of social commentary, satire and protest literature, inspiring critical thinking and social change.

Indian languages hold an important relevance to contemporary problems as they offer insights into sustainable living, eco-friendly practices and environmental conservation. They provide guidance on stress management, emotional balance and mental well-being. They also have a rich tradition of social commentary which inspires critical thinking and action against social injustices. The ancient Indian languages are dying due to modernization and westernization in the current times and at times like these revitalising the Indian languages by integrating them in the school curricula can help in promoting linguistic diversity cultural awareness. By embracing the wisdom and cultural heritage of the Indian languages we can develop holistic solutions to contemporary problems. we can preserve the cultural diversity and inspire critical thinking. We can also foster a deeper appreciation for India's rich linguistic and cultural heritage.

INDIAN MATHEMATICS: Indian Mathematics is not just a subject but it is a powerful tool to solve real life problems. The works of visionary mathematicians like Aryabhatta, Brahmagupta and Bhaskara continue to aspire solutions to contemporary challenges. Indian mathematicians has a rich history of contribution to various fields including arithmetic, algebra, geometry, and calculus. From the development of decimal system to the concept of zero, Indian mathematicians have paved the way for modern mathematical advancements. It is not just about numbers and formulae but about improving lives and creating a better and organised world through cryptography, computer science, data analysis, optimization and scientific computing.

Indian mathematical concepts like modular arithmetic and number theory secure online transactions and protect our digital identities. Combinatorics and graph theory help in optimising algorithms and making our computers faster and smarter. Statistical analysis and machine learning helps us to make sense of complex data and informing decisions that shape out our world. Numerical analysis and differential equations, simulate complex phenomena which advances our understanding of the world.

Mathematical education encourage students to explore the beauty of mathematics, developing problem solving skills that will serve them throughout their lives. Mathematics is used in research and development where its principles give solutions to contemporary problems. It preserves and promotes the rich Indian mathematical heritage which share its rich history to the world. By revitalizing our Indian mathematics we can inspire future generation of mathematicians and scientists which will enhance India's contribution to global mathematical advancement. This will help is create a world where ancient wisdom meets modern innovation, creating a brighter future for all.

TRADITIONAL INDIAN AGRICULTURE: Traditional Indian agriculture with its roots in ancient wisdom offers a unique perspective on sustainable farming practices. This approach, honed over centuries, emphasizes harmony with nature, biodiversity and community involvement. As we face contemporary challenges like climate change soil degradation and motor scarcity traditional Indian agriculture provides valuable lesson for a more resilient and sustainable future. The key principles of traditional Indian agriculture are crop diversity, crop rotation, organic farming, rainwater harvesting, crop selection and community involvement. Planting multiple crops together promotes soil health, increases yield and reduces pest and disease occurrence. In addition to that using natural fertilizers and pest control methods maintain soil fertility and the balance of ecosystem. Conservation of water is also a vital part

of traditional Indian agriculture as conserving rainwater reduces the dependency on groundwater and minimizes wastage of water. The practice of choosing climate resilient and disease tolerant crops ensure food security and adapts to changing weather patterns.

With relevance to the modern day's contemporary problems such as climate change, soil degradation, water scarcity and food security, the traditional farming methods are a saviour as traditional agriculture emphasis on diversity, organic practices and rainwater harvesting help in migrating the impact of climate change and also maintains the soil health, increases fertility and reduces erosion. Diverse farming systems ensure stable food supply and even in challenging environmental conditions. There are a number of opportunities to improve the crops and there are scopes of increasing the food security based in traditional practices of farming. Combining traditional practices with modern technology can enhance the efficiency and productivity of today's crops. Establishing market linkages for traditional crops can improve farmer's viability. Encouraging the government to create policies supporting sustainable agriculture can promote traditional Indian agricultural practices. Furthermore, documenting and disseminating traditional farming practices can facilitate knowledge sharing and knowledge adoption.

Organic farming which is also a part of traditional Indian agricultural practices offer a holistic solution to contemporary problems, promoting sustainable food system, environmental stewardship and rural development. By embracing organic farming we can mitigate climate change through soil carbon sequestration, enhance biodiversity and improve soil health. This approach eliminates synthetic fertilizers and pesticides protecting human health and environment. Organic farming fosters sustainable agriculture, conserves water and promotes food security by ensuring access to nutritious and chemical-free produce. By adopting organic farming along with other traditional farming practices we can create a healthier planet, promote ecosystem balance and ensure a sustainable future. Organic farming's revival has the potential to transform agriculture supporting local economies, preserving natural resources and nourishing communities. As demand grows, investing in organic farming can yield long-term benefits for people, planet and prosperity.

ASTROLOGY: Astrology is an ancient practice that offers unique insights into solving contemporary problems by analysing celestial bodies' positions and influences. Astrology provides a holistic understanding of individual and collective energies. In modern times astrology can help in understanding pressing issues like mental health, relationships and personal growth. Astrology's timeless wisdom can guide individuals in navigating their life challenges and fostering self-awareness and promoting emotional intelligence. As we navigate to complexities of modern life, astrology offers a profound understanding of human nature. By analysing celestial influence individuals can gain a deeper understanding of themselves and others, foster empathy and compassion. Astrology's holistic approach recognises the interconnectedness of all the things encouraging sustainable practices and environmental stewardship. While some may view astrology as limited to ancient traditions, its timeless wisdom continues to inspire modern solutions. Integrating astrology with contemporary sciences can unlock innovative approaches to pressing issues. Astrology's gentle wisdom illuminates our path, helping us confront mental health struggles navigate relationships and unlock our full potential. As we strive for personal growth and collective harmony, astrology's cosmic perspectives remind us of our place within the grand tapestry of life, inspiring us to live in greater synchrony with the world around us by embracing astrology's nuanced insights, we can transcend limited thinking and cultivate a more enlightened understanding of ourselves and the world. In an era of uncertainty astrology's ancient heart beats with soothing reassurance, reminding us that we are not alone in our journey and that the stars are always guiding us home.

In conclusion, ancient Indian practices such as Ayurveda, Yoga, Vastu shastra, Indian mathematics, Indian languages, traditional Indian agriculture and astrology have profoundly impacted and hold an important place in the Indian knowledge system, by offering holistic solutions to contemporary problems. These timeless practices have fostered a unique blend of physical, mental, and spiritual well-being, nurturing a culture of sustainability and environmental harmony. By integrating these ancient wisdoms with modern sciences, India can unlock innovative solutions to pressing issues like healthcare, climate change, and economic development. Moreover, these practices have promoted critical thinking, creativity, and community engagement, empowering individuals to become active participants in the knowledge-sharing process. As India continues to evolve, embracing its ancient heritage will not only preserve cultural identity but also illuminate pathways to a brighter, more sustainable future, where traditional wisdom informs modern progress.

Artificial Intelligence and Ethics:
Applying the Indian Knowledge System to Modern AI Challenges

Siya Shinde

Most people agree that the future is near. As for me, there's no doubt—we're already living it. The future is now.

Artificial Intelligence, or AI has lost no time in becoming an extremely transformative force in almost every facet of society today. Once known only to high-level STEM researchers, names such as 'Chatgpt' and 'Gemini' have achieved household status today. From healthcare to banking to marketing, AI is proving to be indispensable in virtually every field.

"AI won't replace human workers, but people that use it will replace people that don't", says AI expert Andrew Ng. This likely explains why companies have been racing to integrate AI into all their daily operations. Indeed, AI is man's new best friend. AI software, with their inhuman ability to process massive amounts of information within seconds, are able to make decisions for humans. But does this same far-reaching ability to collect data in turn blur the line between security and surveillance? Humans make mistakes. AI doesn't. Humans have biases, prejudices. AI doesn't. Or does it? Software has, in fact, on several occasions, shown to not only replicate, but also objectively justify human biases and prejudices. Private firms have gone so far as to use AI software to make critical determinations regarding health and medicine, employment, creditworthiness, and even criminal justice. But can an inhuman entity be trusted to make decisions that greatly affect human lives? Furthermore, when an AI software makes a mistake, who is to be held responsible? Who is to be blamed when an autonomous vehicle makes a judgement error or when conditions are misdiagnosed? Are these machines really better decision-makers, or should some judgements be left to the living? AI may be quick but is it wise?

This is where the ethical concerns of AI come into the picture. Despite being somewhat of a hot topic, ethical concerns surrounding AI have predominantly been looked at through the lens of Western paradigms and theories of ethics. Rarely has the Indian Knowledge System (IKS) been explored as a potential solution to this complex issue. At first glance, it might seem absurd—what could the Puranas or the Upanishads possibly contribute to a discourse on Artificial Intelligence? While it's true that our ancestors could never have conceived of AI as we know it today, what they did possess was a profound knowledge of ethics - knowledge that remains relevant across eras and contexts.

But what exactly does the Indian Knowledge System (IKS) refer to? The Indian Knowledge System represents vast wisdom, preserved and passed down through ages. Deeply rooted in ancient Indian traditions, IKS spans a wide array of disciplines, including philosophy, medicine, astronomy, mathematics, arts, and ethics. Despite its foundation in historical traditions, this wisdom is far from being frozen in time. Instead, it is dynamic, ever-evolving, and highly relevant to the modern era. IKS, as I see it, is no less than an untapped, vast reservoir of knowledge, brimming with more comprehensive and sustainable solutions to the pressing global challenges of today.

This essay, therefore, seeks to explore the ethical challenges of AI through the lens of the Indian Knowledge System, in an attempt to uncover potential solutions to this complex issue. By

applying the ethical principles of the Indian Knowledge System, it attempts to address the questions raised earlier in this essay. At the very core of IKS lies the principle of Dharma—the righteous duty.

The word 'Dharma' resists a simple English translation. Rooted in the Sanskrit term *'dhri'*, which means "to support" or "to maintain," Dharma embodies the principles that sustain universal order. Dharma is man's moral compass. It directs individuals and societies toward harmony and righteousness. Far from being a rigid rulebook, Dharma adapts to the time, place, and circumstances of various complexities. Therefore, Dharma refers to the true purpose of a being. Just as fire's Dharma is to burn and provide light, the Dharma of AI could be viewed as its potential to serve humanity by enhancing efficiency, improving decision-making, and addressing societal needs. However, Dharma also insists on mindful discernment; actions are dharmic only when they contribute to the greater good without causing harm. For instance, AI's ability to make decisions must be tempered with an understanding of context, ensuring that these decisions uphold values such as compassion, fairness, and truthfulness—qualities central to Dharma. Let us consider an AI system used in recruitment. If its algorithm perpetuates biases against certain groups, it deviates from its Dharma by undermining equality and justice. Addressing this requires a reflective approach, where developers consciously align AI's function with the principles of fairness and inclusivity.

Furthermore, Dharma teaches that ethical principles should not be applied mechanically but with careful consideration of their impact. In the Mahabharata, Krishna illustrates this through the story of a saint who, bound by his vow to never lie, inadvertently caused harm by revealing the location of innocent people to bandits. This tale highlights the need for contextual wisdom, a quality essential in designing and deploying AI. Ethical AI must move beyond rigid rule-following to embody adaptability, prioritizing actions that serve the greater good over unyielding adherence to codes.

Finally, Dharma is concerned with the interconnectedness of duties and responsibilities. An AI system's "duty" is not just to its immediate task but also to the broader ecosystem it impacts. For developers, this means considering the long-term implications of AI technologies, from environmental sustainability to privacy.

Building upon Dharma is the idea of Ahimsa—non-violence. Rooted in the Sanskrit word अहिंसा, Ahimsa emphasizes the intent to avoid harm not just in action but in thought, word, and impact. It calls for a compassionate, respectful, and harmonious interaction with all beings, extending even to the inanimate.

The concept of Ahimsa, as highlighted in Patanjali's Yoga Sutras, stresses the importance of aligning our intentions and actions to avoid harm. Let us now apply this principle to AI. According to Ahimsa, the development and deployment of technology must take place in ways that prioritize the well-being of everyone involved. One of the pressing concerns of AI is its potential to inadvertently cause harm, whether through biased algorithms, job displacement, or environmental consequences of high-energy computing. Ahimsa reminds us that harm is not just physical; it includes psychological, emotional and societal harm. For instance, if an AI application reinforces stereotypes or manipulates public opinion, it violates the principle of Ahimsa by causing divisiveness and emotional harm. Adhering to Ahimsa would thus require designing AI systems to minimize biases and protect individual privacy by keeping inclusivity and fairness in mind.

Mahatma Gandhi's modern interpretation of Ahimsa, was in fact how he guided India's struggle for independence. Gandhi emphasized non-violence as a means of addressing injustice without perpetuating harm. When applied to AI, this could translate into using technology for conflict resolution, promoting social justice, and mitigating inequalities. For instance, AI can support underprivileged communities by providing access to education, healthcare, and legal resources.

Moreover, Swami Kriyananda's teachings on the subtlety of Ahimsa, which caution against harm in thoughts and attitudes, point towards the responsibilities of AI developers. The creation of AI requires an approach that avoids harm in subtle but significant ways. For instance, if an AI software prioritizes profit over well-being, such as exploiting user data for manipulative advertising, it breaches the principle of Ahimsa.

One can once again look to Ahimsa for guidance when it comes to the environmental concerns of AI. The energy-intensive process of training large AI models contributes to carbon emissions, directly causing harm to the environment. Ahimsa encourages us to adopt sustainable practices, such as exploring renewable energy sources for powering AI systems. Let us now circle back to the interconnectedness of actions, a phenomenon reflected in the concept of Karma.

Karma, derived from the Sanskrit word for "action" or "deed," emphasizes the thought that every action generates consequences that shape one's life and future. The interplay of thoughts, words, and actions forms a dynamic cycle of cause and effect. Simply put, what goes around comes around. Even Newton, with his third law of motion, approves - Every action has an equal and opposite reaction.

AI systems set into motion ripple effects that affect society, the economy, and the environment. Actions taken during the development of AI only prove the principle every choice carries an outcome. For example, biased algorithms that disadvantage marginalized communities represent negative karmic actions, leading to societal harm. To create positive Karma, AI systems must operate along the lines of fairness, transparency, and inclusivity.

Developing AI in alignment with Karma would help preserve the actual purpose of AI; what it was originally intended for - alleviating suffering and improving lives. The true and huge potential of AI can only be realized when actions are guided by the intent to serve humanity, rather than narrow self-interest or profit motives.

Yet ethics is not merely about avoiding harm; it is also about fostering harmony. The ancient Indian philosophy of Vasudhaiva Kutumbakam, which translates to "The world is one family," is an idea that is rooted in the teachings of the Mahopanishad, which reflects the belief that all of humanity, and indeed all of life, are part of one larger family.

At the heart of Vasudhaiva Kutumbakam is the idea of oneness. This concept encourages us to recognize our shared humanity. After all, we are all human. We bleed the same when cut, laugh the same when tickled, and shed the same tears. AI, if created in alignment with this philosophy, can promote inclusivity and break down barriers of division. For instance, AI systems can be made accessible to a global audience, regardless of language, geographic, and socio-economic boundaries.

Vasudhaiva Kutumbakam also emphasizes the importance of compassion and empathy. By recognizing the experiences and struggles of others, we can act with greater understanding and care. AI systems, especially those used in healthcare, education, and customer service, can be designed to enhance well-being. While it's true that AI might not feel, that doesn't mean that it cannot touch human emotion. AI in mental health applications can help individuals cope with stress, anxiety, or depression by offering tailored advice or providing access to online therapy. Again, it is essential to ensure that these AI systems are developed with ethical guidelines that protect against bias and exploitation.

In today's world, where divisions based on race, nationality, and religion often lead to conflicts, the principle of Vasudhaiva Kutumbakam offers a solution. For instance, AI on social media platforms can be used to automatically detect hate speech or discriminatory content, leading to a more inclusive digital space.

Another concept that has always been central to the very fabric of Indian culture, is the concept of Satyam, with texts such as the Bhagavad Gita and Upanishads emphasizing that truth is an essential guiding principle in all aspects of life. Satyam represents the unwavering pursuit of truth. In a world where machines are making decisions that were once left to humans, what exactly constitutes "truth"? AI systems have the ability to process information at speeds far beyond human capacity. However, this still does not mean that AI can access or reveal the "truth" in the purest sense as envisioned in Hindu philosophy.

One of the central challenges in AI is what is known as the "black box" problem. AI systems, particularly those using machine learning, are capable of generating predictions, recommendations, or decisions based on certain patterns they identify within data. However, the exact processes that lead to these outcomes are not always transparent or understandable to human users. In the context of Satyam, this lack of transparency is troubling because it suggests that the truth may be distorted. When AI operates in a manner that is not fully comprehensible or explainable, it becomes difficult to ascertain whether the decisions it makes align with the ethical principle of Satyam. AI has the potential to shape individuals' beliefs, preferences, and behaviour through algorithms that are focused on maximising profit. This of course raises concerns about manipulation, especially when it comes to the use of AI in advertising, social media, and political campaigns. To uphold the principle of Satya in the age of AI, we must ensure transparency, accountability in the development of AI technologies. This means ensuring that AI systems are designed in ways that are explainable and that their decision-making processes are understandable to humans.

But perhaps what makes IKS most relevant in the AI age is its holistic perspective. Beyond logic and efficiency, it also takes into consideration the emotional and spiritual aspects of human existence. The principle of Anukampa—compassion—urges us to create AI systems that understand and support human emotions, especially in sensitive domains like mental health or caregiving. Compassion ensures that AI remains a tool of empowerment, not alienation. Compassion in this context refers not only to sympathy for the suffering of others but also to the desire to take action to alleviate that suffering.

In the Bhagavad Gita, compassion is closely tied to the concept of Dharma, or righteous action. Krishna encourages Arjuna to act in accordance with his Dharma, which includes not only fulfilling his duties but also showing kindness and compassion to all beings. Compassion, in this sense, is not a passive feeling but an active force that produces action, especially when faced with the suffering of others. Anukampa, therefore, represents the drive that motivates

one to alleviate suffering and promote the well-being of all living beings, without discrimination. Compassion requires not just sympathising with others but also taking deliberate steps to reduce their suffering. It refers to doing, not just feeling.

AI systems, particularly those involved in decision-making processes, are typically designed to maximize efficiency and accuracy. However, these objectives do not inherently prioritize human emotions, suffering, or empathy. For example, AI algorithms used in healthcare might prioritize cost-effectiveness over the individual well-being of patients, potentially leading to decisions that lack compassion. This relationship between humans and AI is another area where Anukampa can play a crucial role. When AI systems are used in sensitive areas such as mental health support or customer service, they may act neutral or objective, but they lack the understanding and emotional intelligence that human beings bring to these interactions. For example, while an AI chatbot may provide immediate responses to mental health queries, it cannot fully grasp the emotional complexity of a person's situation. It cannot respond with the warmth, intuition, or compassion that a human counsellor can provide. This brings into question whether reliance on AI in such contexts might lead to a reduction in the human touch that is often necessary for healing and support.

If AI systems, such as recommendation algorithms on social media platforms, prioritize profit over the well-being of users, they can contribute to the creation of echo chambers, which further propagates divisiveness. AI systems should be designed with the understanding that human beings are not just data points but complex, emotional, and interconnected individuals who deserve compassion and understanding.

Ultimately, the Indian Knowledge System offers more than just a set of ethical guidelines; it presents a vision of harmony between technology and humanity. By integrating timeless principles like Dharma, Ahimsa, and Vasudhaiva Kutumbakam into AI development, we can ensure that innovation serves not just as a marker of progress but as a force for good.

The application of Indian Knowledge Systems to AI ethics offers not just a solution to ethical dilemmas, but a complete shift in how we approach technology itself. While technological advancements, particularly in AI, continue to advance at an unprecedented pace, they often fail to ensure their alignment with humanity's collective well-being. IKS, with its emphasis on compassionate living, has the potential to reshape AI development, ensuring that it serves humanity not as a tool for profit or control, but as a means of collective good. By marrying the wisdom of the past with the possibilities of the future, we have an opportunity to create an AI landscape that is not only innovative but also inherently human-centered. This integration of IKS into AI ethics is not merely a choice; it is a necessity for the future we seek to build. The wisdom of IKS reminds us that true intelligence lies not just in knowing but in understanding—not just in creating but in caring. The future is now, and it is ours to shape.

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Indian Knowledge Systems:
Relevance of ancient practices for contemporary problems

Divyedarsh Pandey

In 21st century, when the world is filled with technological advancements, innovations, experimentation and progression, we are bound to think one basic question…. Did we really get what we desired? On one hand, we have made luxurious abode for ourselves, skyscrapers building, penthouses, bungalows and so on, enjoying hi-fi network of transport and communication be it bullet trains, flights or high speed motor cars, we reach our destination in our own convenience, one button click of mouse offers plethora of information and entertainment any where-anytime with AI advanced features, remote and wi fi governing home aplliances, robotic assistance in every field, glittering markets to fulfill our need as well as greed, corporate cultured schools, hospitals and other services….the list is so long…

But, on the other hand, we are in a grip of endless pain and uncertainty of life…. Threats of war, nuclear weapon attacks, environmental pollutions in soil, air, rivers and in whole atmosphere bring severe health risks issues, melting glaciers and after effects of global warming, climate change, unwanted natural calamities, spreading of barren lands and challenges of fulfilling the required food supply, capitalistic approach, more industrialization, mechanized money mind, immoral and inhuman behavior towards society are the serious emerging problems in the world. In comparative analysis, we can easily figure out that during the process of modernization, urbanization, capitalization and desire of supremacy, we lost more than we attained. And now, when the whole world is engulfed in this situation, our 7000 old indian civilization, its knowledge system and deeply rooted ancient practices can show the path of numerous solutions for these contemporary problems. In the contemporary global summit, the relevance of ancient vedic lifestyle is not only being emphasized, but has been proved the only solution for sustainable development and sustainable life. Around 6000 years ago, our great saints and excellent scholars of their field had known this very fact that our existence and survival is a two way process. If we care and protect our earth, she will protect, give shelter, food and state of happiness in return and if we neglect her, destroy the biodiversity of nature and ecological chain with our greedy endeavours, it can be a fatal chapter for the whole mankind and the world.

The core concept

Have we ever wondered why in indian families, people used to start their morning with folded hands, touching the earths surface, their face and then their elders ? Why Nityakarmas like Snaanam-Dhyaanam, Surya Namaskar, Yogic exercises and satvik food eating practices are still common in many houses? Why at the entrance of house, it is a common practice to wash the mouth, hand and feet after outdoor activity? Why there is Aachman process (cleaning the eating Zone with water) and remembering God in traditional families? Why Tulsi plant in the courtyard and Neem plant in the Backyard is must? Why Cow is worshipped and its milk is considered auspicious and healthy and being used in many rituals? Because our great saints and scholars had realized this fact many centuries ago that Earth is the only planet to support life full of medicinal flora and fauna and it should never be ignored. They had explored the vital medicinal use of herbs and leaves, already had this wisdom that the Sun is the energy giver and life saver. They knew the energies of Sun, Wind, Water, Sky and Earth which is now being utilized with the help of solar panel. Wind pipes, thermal plants and hydrolic dams.

They knew the importance of panchtatva (five elements…air, water, sun, earth and sky) for sustainability of life in any form. In Sanskrit studies, it is clearly mentioned that all living and non-living beings are made with five basic elements i.e. water, air, fire, earth and sky. These are called panch mahabhoot and described as the essential elements of healthy life. In *PrithviSuktam* of Atharveda, it has been clearly mentioned that earth is our mother who nourish us, protect us, father role is played by sky who is responsible for rain, sunlight, air and change in weather conditions. The word Vasundhara is applied for earth which denotes a heavenly object that holds the whole world and it has many layers of atmoshpheric pressures and gravitational force. Our knowledgeable sages understand the gravitional force of earth and prayed for holding all the Char-achar (living and non-living) things to sustain life.

In Rigveda, it has been clearly mentioned that in universe, there was a black hole and earth came into existence much later surrounded by water, having great mountains, fertile soil, reservoirs, forests and rich natural resources of minerals and diverse flora-fauna. They had this consciousness that the earth is enough to fulfill your requirements, but your greed is endless and useless. If the balance of panchtatva is disrupted, how can life and earth be safe? That's why in our ideology, we emphasise on Vishva Kalyanam, Jeev Kalyanam, Vasudhaiv Kutumbkam and Sarve Bhavantu sukhinah.

Ancient practices for Healthy life
For healthy and long life span, the concept of Shuchita (hygiene), Anushashan (Discipline) and Jaisa Ann, Waisa Mann (our soul is shaped by our eating habits) never go outdated. In Atharveda, there is short story which tells if we cannot keep our body and mind clean and strong, a demon has a boon that he can suck all our blood and destroy the mankind forever. By narrating such stories, the great saints wanted to awaken the common less knowledgeable man towards basic hygiene and healthy eating practices. So many deadly viruses like covid, rubella, nipaah are identified by the scientists and doctors, the focus on hygiene, sanitation and healthy eating habits and disciplined lifestyle has grown widely, But, if we go back in our ancient times, it was already being taught and people lived by following the preachings. Till date, we use grandma's natural remedies like turmeric milk, tulsi tea, ajwain water, fenugreek and fennel seeds powder, aloevera gel, camphor coconut oil for curing common ailments like cough, fever, indigestion, rashes etc. In Ayurveda, it has been mentioned that oil pulling in mouth regularly can maintain your oral health. Now, Dentists are also prescribing oil pulling technique for curing dental problems. Similarly, Ayurveda emphasise on tridosha balance (Vat, pitta, kapha) and strictly prohibit stale, uncooked food. There is a list of food categories which should not be taken during night time. Similarly the straight sitting posture during eating, the mind and soul concentration without any talk and the fresh farm vegetables, fruits and grains are considered best for overall health. As, many diseases like diabeties, thyroid, obesity, cancer etc are widespread, the doctors today are recommending home cooked food rather than packed or processed one. The fast food eating joints with less nutrients are also not in the good list.

Yoga for a better tomorrow
Now. Lets come to Yoga. It simply means fusion of mind, body and soul . Rishi Patanjali has described different yogasanas like hathayoga, aashtang yoga, sahaj yoga, kundalini yoga for overall wellbeing. In modern era, it is known by power yoga in some countries, but the recent research has proved that indian yogic lifestyle if practiced regularly not only keep the body healthy, but also maintains mental and spiritual wellness, enhances concentration and wisdom with meditation. According to yoga sciences, our body is divided into seven chakras and all these chakras should be harmonized. If any of these chakras is disturbed, disease can enter

into our body. Colour therapy, Mantra chanting, Surya Namaskar. Bhramari, pranayama, bhujang aasan, parvatasan, halasan are few effective asanas for a healthy long life. If yoga can do wonders in treating chronic diseases, why should we depend on allopathic pills with side effects? This is an alarming situation that one third of indian population is diabetic with type 1 or 2. None other than yoga can control the diabetes if followed proper diet chart of fresh, satvik, farm products. In India, most pf the population used to eat whole grains, millets, fresh fruit juices and vegetables, but in few years, the food trend shifted towards ready to eat or restaurant menu. But. With the initiative driven by Prime Minister Narendra Modi, the new generation is again shifting towards Millets and whole grains. It has proved that our knowledge system and ancient practices are the base of better tomorrow.

Our holistic approach towards nature
In ancient Sanskrit texts, we find the close connection between nature and human beings, All those things which is required for life are worshipped as dieties. Sun is considered the source of light, agni tatva and worshipped as Surya dev. Similarly, Varun dev is a God of oceans and water, Pawan dev is a symbol of air, Indra is considered the God of rain, Moon is also worshipped for creating night, Sky denotes the atmospheric cover surrounding the earth, save us from the harmful rays of sun, only allows the pure solar energy to touch our mother earth, Forest is called Vandev, trees are called Vrikshadev, animals are also associated with gods and goddesses and being worshipped in different names like sheshnaag, Nagdevta, Kaag devta, Mayur, Marut and so on.

Even if we think about Dashavtars explained in our religious texts, it is closely associated with environmental balance and evolution of life. The first avatar was matsya (fish) denotes the life starts in water, then Kachhap (tortoise) life in water as well as on land, then varaah (wildanimal) in Jungle, Narsimha (half man half lion) from wild to conscious living being, then Vamana (Dwarf man), then Parshuram, Ram, Krishna and Budhha (Humans of valour, sacrifice, love and harmony). All these avtars specifically denotes the purposeful life in synergy with the ecosystem of that era.

It is not wrong to say that whatever is written in these ancient texts are not imaginary, but based on true scientific observations and findings. To connect the comman man with the nature, they wrote Dharmashastra and epics like Ramayana and Mahabharata, Jatak kathayein and Subhashita (good sayings in four line shlokas). In different vedas i.e. Rigveda, Atharveda and Yajurved, it has been strongly emphasised that we are blessed with snow clad mountains, rich fertile soil, rivers, lakes, waterfalls, dense forests with wide range of plantations and animals, oceans, different seasons and abundant sunlight. All things are interrelated and belief of co- existence is mandatory for healthy and happy life.

Purification and conservation
In ancient indian texts, the concerns for water, air and soil pollution is also noticed in many shlokas and advised the man to be wise in utilising the natural resources without disturbing the bio-diversity. Many verses in Rigveda emphasise on clean water, good soil, clean air and sustainable irrigation practices. There is a old tradition of throwing coins in rivers. In ancient times, copper coins were used, so when people throw copper coins, it gets deposited and helps in purifying the water as copper is believed to be the natural purifier and good conductor of electricity. So, it works two ways…. purification and energy charger of body and nature. Few years back, bronze, copper, silver and brass utensils were used for different processes in the kitchen. Water was stored either in clay pots or copper utensils. Earthen clay and Bronzewares were used in cooking food. As plastic wares, non-stick utensils became

fashion and aluminium and Steel were in, our ancient practices were side-lined. But, in 21ˢᵗ century, when recent findings has proved that those old things were having vital benefits, we are again accepting our ancestor's way of life.

In our ancient practices, our Rishis, the great scholars and scientists of their fields perform yajna (Medicinal Fire) to purify the air and atmosphere to maintain weather cycle, keep viruses away from us, bringing good monsoon for irrigation practice. For water sanitation and conservation, they gave strong instructions not to pollute water by throwing garbage and other contaminated wastes like urine and shit as it is considered the biggest sin of life. Ganga, Godavari, Yamuna, kalindi, saraswati are the sacred rivers in our Sanskrit literature. There is a popular story of Gangaavtaran in which it is mentioned that Ganga came from celestial path with the efforts and continuous effort of Bhagirath. Though in modern times, we call it an imaginary story, but if we rethink, we will be astonished with this interesting story telling and wonders how our great saints tried to keep our river pure for centuries with a worship angle. Only Ganga water never gets stale, even if stored for many years. But, now with all scientific conclusions and modern approaches, its an irony that we are unable to protect our rivers, wells, lakes etc. and we have no other way left than to chose our Vedic lifestyle to preserve our environmental balance.

In Atharveda, there is a formula for soil fertility and goodness, emphasise on natural manure made of leaves, cow dung and other natural products. Our ancient Sanskrit scholars also advocates plantation of big and medicinal trees and prohibits to cut it. That's the reason that in our sacred rituals and prayers, a long traditional practice of keeping the mango leaves, tulsi leaves, amla, haldi, honey, belpatra, lotus flowers, marigold flowers, banana leaf etc is still prevalent. It is believed that Lord Vishnu resides in ASHWATH (Peepal) tree, Mango, Amla, Bel, Jamun, Banana, Kadamb, VatVriksha (Banyan Tree) and Devdaru are also considerd very sacred. Now, in modern scientific finding, it is discovered that Peepal is the only tree which provides 24 hours oxygen, which our Sanskrit texts had already discoverd and being worshipped for this very reason for many centuries. Similarly, Banyan tree and Devdaru has the strong holding capacity of soil which prevents soil erosion. In Atharveda, there is one shloka mentioning that…

one pond is equivalent to ten wells, one lake is equivalent to ten ponds, one son is equivalent to ten lakes and one tree is equivalent to ten sons.

Apart from vedas, In Ramayana, when Lord Rama in his exile period of fourteen years goes to forest, it is being conveyed that if there were no forests, how can he live far from his palace. Undoubtedly, the forest became his perfect abode and the monkey clan helped him to fight Ravana who abducted Sita. Similarly in Mahabharata, when Pandavas were in exile period, they also discovered different types of flora and fauna in forests, founded caves to live and gave the perfect example of living harmoniously with Nature.

If we talk about Sanskrit studies, we cannot forget the famous poet of Sanskrit literature Kalidasa. He wrote number of books in which he strongly potrayed earth, nature and the magical effects of environmental ecology. In *Kumarsambhavam*, he wrote about our great Himalayas and oceans, in *Meghdootam*, His hero is none other than cloud, in *Raghuvansham*, he wrote on *Raghukul* and the green prosperous land surroundings, in *Ritusamhara,* he described the different seasons, especially spring with its significance and blooming flowers with a pleasant fragrance and in *Abhigyan Shakuntalam,* writing a love tale, when he described shakuntala leaving Kanva's ashram, he also mentioned that Shakuntala embraced

all the plants and trees with thanksgiving note and reminded her friends to take care of them in her absence.

Morality and Social strength

Bhagvat geeta is the torch bearer for any illusioned man. When Lord Krishna gave preachings to Arjuna in the Battle field and described we are bound to live our life as the destiny decides, Believe in karma and don't think of the results as it is not in our hands, our deeds make us pure soul or sinful heart etc. are very much relevant in todays time. When people are suffering with mental problems, violence and chaos in life, Geeta gives solution to everyone. Similarly Satyavadi Harish Chandra's story, the sacrifice of King Bali, the obedient son story of Ram in Ramayana, the importance of unbreakable sacred marriage union of Shiva-Parvati and different dieties, practical and logical skillful learning in Guru-Shishya parampara under gurukul knowkedge system, the four categorized ashramas of life, the four important rules…Dharma, Arth, Kaam, Moksha etc open the door of awakening towards morality, humanity, good deeds and self awakening. It helped in building better society to live. Ram rajya example is still given for reference. Undoubtedly, Indian philosophers and scholars believed in close knit large joint families, less ambition, more sacrifice, simple living and high thinking. Similarly, Kautilya neeti, chanakya's Arthshastra for strong economy, clean and unbiased administration, Aryabhatta mathematical Zero and pi inventions, Paninis Grammatic work, the contribution of Charak and Shushrut in Medical field are very much relevant today.

So, in conclusion we can say that in every field of life, be it science, math, medicines, architecture, economy, political stress, issues of sustainable development, health, lifestyle, environmental concerns, human values, brotherhood and peace among nations, our Indian knowledge system and our ancient practices provide solution to every problem. Vedas, Upanishadas, Puranas, epics and other ancient Sanskrit books have enormous examples of coexistence of nature and living beings with sustainable development of civilization. A great hymn for welfare of everthing around us, we recite in our prayers till date….

ॐ द्यौः शांतिरन्तरिक्षं शान्तिः

पृथिवी शान्तिरापः शान्तिरोषधयः शान्तिः ।

वनस्पतयः शांतिर्विश्वेदेवः शांतिर्ब्रह्म शांतिः

सर्व शांतिः शांतिरेव शांतिः सा मारे शांतिरेधि ॥

ॐ शांतिः शांतिः शांतिः

Indian Knowledge Systems:
Relevance of Ancient Practices for Contemporary Problems

Samarth S Nadagoudar

Introduction

Indian civilization, one of the most ancient and enduring in the world, has long been celebrated for its vast and diverse repository of knowledge. Spanning millennia, this civilization has cultivated profound systems of understanding across numerous fields, including philosophy, science, medicine, art, governance, and spirituality. These knowledge systems are deeply intertwined with India's cultural and intellectual legacy, forming an integral part of its historical and contemporary identity.

At the core of this intellectual tradition are foundational texts such as the *Vedas* and *Upanishads*, which encapsulate early explorations of metaphysics, ethics, and the nature of existence. These texts, revered as sources of timeless wisdom, have inspired countless generations in their pursuit of knowledge and self-realization. Additionally, classical treatises like the *Arthashastra*, attributed to Kautilya (Chanakya), and the *Charaka Samhita*, one of Ayurveda's seminal works, exemplify India's pioneering contributions to political theory, economics, and medical science. These works are not mere relics of the past but dynamic testimonies to the intellectual depth and practical ingenuity that characterized ancient India.

The relevance of these ancient knowledge systems has only grown more pronounced in today's rapidly transforming world. Humanity faces an unprecedented array of challenges—ranging from the existential threat of climate change and widespread mental health crises to the perils of unsustainable development and environmental degradation. While technological advancements have opened new horizons, they have also introduced complexities and disruptions that demand wisdom beyond immediate solutions. In this context, revisiting and reinterpreting India's ancient practices and principles can provide invaluable insights for navigating modern dilemmas.

Indian knowledge systems stand out not only for their depth and sophistication but also for their remarkable adaptability and universality. Unlike static frameworks, these systems were designed to evolve in response to changing circumstances, making them perpetually relevant. Rooted in holistic and sustainable approaches, they emphasize harmony—between humans and nature, the individual and society, and the material and the spiritual. This intrinsic balance, a hallmark of Indian thought, aligns closely with the pressing need for integrated solutions in today's fragmented world.

Through this essay, we will explore how the wisdom of Indian knowledge systems can be applied to address contemporary challenges. By examining their principles and practices, we can uncover pathways to sustainability, well-being, social harmony, and ethical leadership. These ancient systems are not mere remnants of history but vital resources for the future, offering transformative ideas to guide humanity toward a more inclusive, sustainable, and resilient existence.

Relevance of Ancient Indian Knowledge Systems
1. Environmental Sustainability
Ancient Indian texts emphasize harmonious coexistence with nature. Concepts such as *Vasudhaiva Kutumbakam* and *Prakriti Rakshanam* (protection of nature) advocate sustainable living. Practices like rainwater harvesting, outlined in Kautilya's *Arthashastra*, and organic farming, mentioned in texts like the *Krishi Parashara*, provide actionable strategies for combating environmental degradation. By revisiting these principles, we can address contemporary issues such as deforestation, water scarcity, and climate change.

Indian rituals and festivals, such as *Vriksha Bandhan*, also highlight the sacred bond between humans and nature. These practices encouraged conservation long before modern environmental movements emerged. Integrating these philosophies into policymaking and education can foster a sustainable relationship with the environment. By embedding these ancient principles into contemporary practices, individuals and governments can work together to promote renewable energy, reduce waste, and nurture biodiversity.

Additionally, ancient texts like the *Rigveda* highlight the reverence for natural elements like rivers, forests, and mountains, signifying their role in sustaining life. These texts emphasize not just the utility but also the sanctity of natural resources. Reviving this perspective can help shift modern attitudes from exploitation to stewardship. Implementing these ancient values in initiatives such as carbon offset programs, reforestation projects, and sustainable urban planning can strengthen global efforts to combat climate change.

The emphasis on balance in the Indian worldview—whether in ecological systems or human behavior—remains critical. In practices like crop rotation and natural pest management mentioned in *Krishi Parashara*, we find scalable models for modern agriculture that address soil depletion and food security concerns. Policymakers and agricultural scientists can adapt these methods for sustainable global farming.

2. Health and Well-being Ayurveda, one of the world's oldest medical systems, emphasizes preventive healthcare and holistic well-being. With the rise of lifestyle diseases and mental health challenges, practices like yoga, pranayama, and balanced nutrition have gained global acceptance. Integrating traditional Indian medicinal knowledge with modern healthcare can offer effective solutions for conditions like stress, obesity, and chronic illnesses.

For example, yoga and meditation—once confined to India—are now globally recognized for their physical and mental health benefits. The principles of *Dinacharya* (daily routine) and *Ritucharya* (seasonal routine) in Ayurveda provide personalized guidelines for maintaining health in alignment with nature. Modern healthcare systems can adopt these preventive approaches to reduce disease burdens and enhance well-being.

Furthermore, Ayurvedic principles address not only physical health but also mental and emotional well-being. Concepts like *Sattva* (mental clarity) and *Ojas* (vital energy) emphasize the interconnectedness of mind and body. This holistic approach is particularly relevant in combating the rising tide of anxiety, depression, and burnout in contemporary society.

Incorporating Ayurvedic dietary practices can also aid in combating malnutrition and food-related illnesses. Emphasizing locally sourced, seasonal, and balanced meals aligns with sustainable practices and enhances community health. Government and healthcare institutions

could develop programs that integrate Ayurveda with modern medicine to create cost-effective and culturally resonant healthcare solutions.

Recent research highlights the efficacy of herbal treatments mentioned in Ayurvedic texts for managing chronic diseases like diabetes and arthritis. Encouraging collaboration between traditional practitioners and modern pharmaceutical companies can lead to the development of innovative treatments rooted in natural resources. Such integrative approaches can help reduce healthcare disparities globally.

3. Education and Ethical Living
The ancient Indian *gurukul* system of education emphasized critical thinking, ethics, and practical skills. In a world dominated by rote learning, this model offers valuable lessons for cultivating creativity and moral character. Similarly, the *Bhagavad Gita* provides timeless wisdom on ethical decision-making, applicable in modern leadership and governance.

Ancient Indian education promoted the holistic development of individuals, integrating physical, intellectual, and spiritual growth. The close teacher-student relationship in the *gurukul* system ensured personalized guidance. Drawing inspiration from this model, contemporary education can address the growing disconnect between students and mentors and nurture values alongside skills.

Moreover, the *gurukul* system's emphasis on experiential learning can serve as a template for modern education. Hands-on learning, collaborative problem-solving, and ethical reasoning were core components of this model, which can be reimagined to suit contemporary needs. Integrating moral philosophy, environmental studies, and wellness into curricula can produce well-rounded individuals equipped to navigate global challenges.

The teachings of Indian texts like the *Upanishads* also encourage introspection and lifelong learning. By cultivating curiosity and self-awareness, these texts provide a framework for continuous personal and professional growth. Digital platforms and educational technologies can amplify these ancient principles, making them accessible to diverse audiences worldwide. The values imparted through Indian education systems—such as integrity, compassion, and perseverance—are essential in addressing modern challenges like corruption and ethical dilemmas. By embedding these principles into leadership training and corporate ethics programs, organizations can foster a culture of accountability and inclusivity.

4. Social Harmony and Inclusivity
Indian philosophy emphasizes *Dharma* (righteousness) and *Ahimsa* (non-violence), promoting social harmony. The idea of unity in diversity, deeply rooted in Indian culture, can inspire solutions to global issues like communal strife and discrimination. These principles encourage tolerance and peaceful coexistence, crucial in today's polarized world.

Texts like the *Tirukkural* and teachings of leaders like Mahatma Gandhi draw from these ideals to advocate for justice and inclusivity. The emphasis on collective well-being over individual gain resonates with modern efforts to create equitable societies. Applying these values in global governance can help address pressing issues like inequality, migration, and conflict resolution.

Additionally, Indian practices such as *Panchayati Raj* (village governance) demonstrate the importance of grassroots democracy and participatory decision-making. This model can

inform modern governance structures by empowering local communities and fostering accountability. By integrating these principles, policymakers can craft initiatives that ensure both equity and efficiency.

Indian festivals and rituals often celebrate diversity and inclusivity, reinforcing the principle of unity in diversity. For instance, the harvest festivals across different states, while unique in customs, collectively underscore the interdependence of agriculture, community, and nature. Such cultural practices can inspire initiatives to bridge social divides and foster solidarity.

Social harmony also requires mechanisms for reconciliation and mutual respect. Ancient Indian conflict resolution methods—centered on dialogue and ethical reasoning—can inform peace-building efforts in conflict zones. These principles emphasize empathy and the pursuit of common ground, offering alternatives to adversarial politics.

5. Technology and Innovation

Ancient Indian texts demonstrate remarkable scientific knowledge. From the *Sulbasutras*, which contain early mathematical principles, to Aryabhata's contributions to astronomy, India's intellectual tradition reflects a spirit of inquiry and innovation. Reviving and integrating this scientific mindset can enrich contemporary research in fields like sustainable technology and artificial intelligence.

The concept of zero, advancements in algebra and trigonometry, and innovations in metallurgy—evident in structures like the Iron Pillar of Delhi—showcase India's legacy of scientific excellence. Modern scientists can study and adapt these innovations to uncover new methodologies and frameworks for problem-solving.

For example, ancient water management systems, such as stepwells and reservoirs, demonstrate engineering ingenuity and environmental sensitivity. Adopting such methods can inspire sustainable infrastructure development in arid and semi-arid regions today. Moreover, India's ancient maritime knowledge, evident in the *Jataka Tales* and archaeological findings, highlights expertise in navigation and shipbuilding. Revisiting these techniques can contribute to advancements in marine technology and sustainable trade practices.

Ancient Indian metallurgy, which produced rust-resistant iron and intricate alloys, offers lessons for sustainable material science. Research into these techniques can inspire innovations in modern industries, reducing dependency on harmful processes. Similarly, texts like *Vaastu Shastra* highlight eco-friendly architectural principles that align with contemporary goals of green construction and urban resilience.

Expanding the Scope of Indian Knowledge Systems

While the five domains discussed above offer significant insights, the relevance of Indian knowledge systems extends further. Fields such as performing arts, linguistics, and conflict resolution also present valuable lessons for contemporary society.

1. Performing Arts and Cultural Expression

Indian classical music and dance forms, deeply intertwined with spirituality and storytelling, promote emotional resilience and cultural continuity. Practices like *Natyashastra* provide insights into the therapeutic and communal value of arts, which can be harnessed to address modern issues like cultural alienation and mental health challenges. Integrating performing

arts into mental health programs can enhance their effectiveness by fostering creativity and emotional healing.

Incorporating traditional art forms into education can also nurture cultural pride and global appreciation. Collaborations between traditional artists and modern media can rejuvenate interest in these forms, preserving them for future generations while adapting them to contemporary sensibilities.

2. Linguistics and Communication

The ancient linguistic tradition, encompassing texts like *Panini's Ashtadhyayi*, reflects unparalleled grammatical precision and philosophical depth. Modern linguistics, computational models, and artificial intelligence can draw inspiration from these frameworks to improve natural language processing and multilingual systems. Incorporating these principles into global communication strategies can strengthen cross-cultural understanding. The systematic study of language in ancient India—which laid the foundation for phonetics, semantics, and syntax—offers tools for preserving endangered languages and creating inclusive digital platforms. These efforts can support marginalized communities and foster linguistic diversity in an increasingly globalized world.

3. Conflict Resolution

Indian epics and texts often emphasize dialogue, negotiation, and ethical reasoning in resolving conflicts. Applying these principles to global diplomacy can provide alternatives to adversarial politics and warfare. Reviving the principles

Conclusion.

Indian knowledge systems, deeply embedded in holistic and sustainable philosophies, present a treasure trove of insights that remain highly relevant to addressing the pressing issues of the contemporary world. These systems, cultivated over millennia, emphasize the interconnectedness of all aspects of existence be it the relationship between humans and nature, the integration of physical and mental well-being, or the balance between individual needs and societal harmony. Their timeless wisdom holds immense potential for guiding humanity through the multifaceted challenges of the modern era.

By integrating the principles of ancient Indian knowledge with modern advancements in science and technology, we can craft innovative and effective solutions to critical global issues. Areas such as health, education, environmental conservation, and social harmony can benefit immensely from this synthesis. Ancient practices like yoga, Ayurveda, and holistic education systems resonate profoundly in a world grappling with rising mental health crises, lifestyle diseases, and ethical dilemmas. Similarly, environmental stewardship, rooted in Indian traditions, offers pragmatic and sustainable approaches to combating climate change, deforestation, and water scarcity.

Reviving these practices is not about romanticizing or regressing to the past; rather, it is about extracting the essence of these time-tested principles and adapting them to contemporary needs. Indian knowledge systems advocate for dynamic and adaptable frameworks, making them well-suited to complement modern thought processes. This adaptability underscores their continued relevance in crafting a sustainable and inclusive future. In a world increasingly searching for alternatives to exploitative and unsustainable practices, the Indian approach, with its emphasis on balance, equity, and respect for all forms of life, shines as a beacon of wisdom and resilience.

To ensure the continued relevance and application of these ancient systems, it is imperative to expand research efforts and foster global dialogue. This includes documenting, analyzing, and contextualizing traditional knowledge in ways that resonate with contemporary audiences. Collaborative research across disciplines, involving experts in science, humanities, and social sciences, can unlock new dimensions of understanding and innovation. Such interdisciplinary efforts are essential for creating bridges between ancient wisdom and modern solutions.

Equally important is the preservation of traditional knowledge in its authentic forms. Indigenous practices, oral traditions, and community-specific wisdom are at risk of being lost due to globalization and cultural homogenization. By investing in initiatives that document and preserve these practices, we not only honor the cultural heritage of Indian civilization but also ensure that these invaluable resources remain accessible for future generations.

Cross-cultural exchanges play a pivotal role in amplifying the relevance of Indian knowledge systems on a global scale. By encouraging dialogue and collaboration between diverse cultural and intellectual traditions, we can facilitate the blending of ideas and foster mutual learning. This global exchange is crucial for addressing challenges that transcend national and cultural boundaries, such as climate change, global health crises, and social inequality.

In essence, embracing Indian knowledge systems involves a commitment to reimagining how ancient wisdom can coexist with and enhance modern progress. It calls for a collective effort to prioritize sustainability, inclusivity, and harmony in all facets of life. By doing so, we can create a world where development is not at odds with environmental conservation, where individual well-being aligns with societal good, and where cultural diversity enriches rather than divides.

As humanity moves forward in its quest for sustainable development, Indian knowledge systems provide a timeless foundation upon which to build. By investing in interdisciplinary research, preserving traditional practices, and encouraging meaningful global engagement, we can unlock the transformative potential of this ancient heritage. In doing so, we not only address contemporary problems but also pave the way for a more harmonious and balanced future for generations to come.

Indian Knowledge Systems:
Relevance of Ancient Practices for Contemporary Problems

Dhaniya Mehta

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"We owe a lot to the ancient Indians without which most modern scientific discoveries would have been impossible."

-Albert Einstein

The Indian knowledge system is one of the ancient systems of the world. Keeping in mind the population size of our nation, our leaders thought of having a diverse knowledge system in the country that could cater the needs of its learners. The Indian culture, philosophies, wealth, culture, art, architecture, literature as well as its educational practices had spread all over the globe. This system not only benefitted the native citizens but many foreign travellers too came here to learn these skills. For them, 'India was a land of wonder'.

The ancient education system in India was itself the way of life. Formal as well as informal education (worldly lessons) were being given to its learners. Even indigenous education was imparted to the young minds. The temples emerged as the centres of learning which later grew as large universities. Some of the well-known universities of ancient India include Taxila, Nalanda, Vikram Shila, Vallabhi, Odantapuri, Benaras, Kanchi, Navadeep, Jagaddala etc.

The Indian knowledge traditions consisted vast amount of concise information which was highly advanced even in comparison to the modern knowledge systems. Many researches took place in ancient India without the presence of modern advanced technology but these are still way more modernised than the modern hypothesis. The system in India has a heritage of being logical, achievable and being complementary to the daily lives of people. It was considered as a source for knowledge, traditions and practices that encouraged and guided humanity.

The Indian knowledge system is a process of transfer of knowledge from one generation to the next generation. This system serves as the powerhouse of the nation which provides the nation with efficient and productive citizens year after year. India has had a glorious past in all aspects including traditions, culture, art, architecture, literature, medicine, astronomy, mathematics, polity, health and wellness and many more. These traditions were imbibed into young minds through well-structured practices. During ancient time, the scriptures, epics like Ramayana and Mahabharat, the Vedas, Upanishads, Dharma Shastras, Puranas etc. were the important sources for the teaching- learning process. Over the years, the religious literatures of the Buddhists and Jains also got included in this. Later on, many scholars wrote large number of books on almost every sphere of life. Some of these notable scholars include Chanakya (political sciences), Sushruta (medicines), Aryabhata (mathematics), Panini (grammar) and many others.

During ancient India, when these practices were prevalent throughout, India was known as the golden world. It was the land of wonders for people of different nations. The learning centres were centres of attraction. People from all over the world came to know about these knowledge traditions. In the modern context, there is a need to revive these knowledge traditions to achieve the golden era once again. The western mindset has implanted in our minds the seeds of rational thinking. It is thus important to move out from the imperial mindset and recognise the glory of the regional cultures. To look for a common future for the existence of all, it is

important to leave behind rational reasoning at some point of time and look forward to values of togetherness, unity, equality, caring etc. Our ancient traditions incorporate the concept and principle of Vasudaiva Kutumbakam which means that the whole earth is one family. And to have a sustainable life, it is important to value each other's feelings. In this process, the IKS or Indian knowledge system is being introduced to the youth. This is based on the principles of Drishti, Gyan and Lok Parampara.

These traditions provide a new perspective to the existing challenges and help search for solutions to contemporary and emerging problems of the world. The knowledge provided by these practices is equally relevant in today's time too. Although these traditions were practiced a long time ago, they serve as efficient solutions in the present context too. These traditions were meant to be passed on from one generation to the next, tracing lineages and heritage over time.

The system of Indian education started thousands of years ago. But its ideas and beliefs are still rooted in our society. The ancient system of Indian education covered teachings on large number of topics such as literature, art, architecture, painting, medicine, astronomy, astrology, mathematics and many others. In fact, learnings were found on all the modern-day subjects of the 21st century. The following write up provides a brief insight into various ancient systems which hold relevance even in the present context. It tells us about the various ways through which we can learn from our past to make a better future. Many of the ideas and principles of the ancient system are relevant even today which can serve as a remedy for the future generations to come. Some of them include:

The ancient traditions considered man as a complex superpower who is capable of achieving the inner as well as the outer self. This was possible by mastering various theoretical as well as practical skills which led to the holistic development of the learner. In present times, the system has somewhere turned towards just the fulfilment of desires. In such situations, revisiting the ancient traditions sought to be very helpful.

Value based learning was an important characteristic feature of the ancient traditions which helped in fetching men of good character. Truthfulness, sincerity, honesty, non-violence, caring, unity, discipline etc. are the main objectives of this education system. These days, not following values is an accepted norm in the society. The virtues of desires, greediness, jealousy etc. is more prominent over the earlier ideas. The revival of the ancient learnings is thus required for a nation to flourish peacefully.

A nation's progress is not just calculated by its GDP (Gross Domestic Product). It involves many socio – cultural aspects as well. The value system of the country is one of the most significant aspects in determining the strength of the nation. There is a huge difference between an educated society and a value-based society. Knowledge is considered as power but knowledge in the hands of someone who does not adhere to values, it can become a weapon of destruction.

Values have played a very important role in the forming of our knowledge traditions. From scientific values to practical values, these traditions also fostered in its learners the value for the environment we live in. Concerns for environment are mentioned in brief in our traditions. Even our cultural rituals and beliefs respected the environment. Also, all these beliefs had scientific theories associated with it which led to the well- being of all.

While having a desire to witness Bharat as one of the developed (Viksit) nations, it is very important to give significance to these value traditions. Value based learning is the base for a democracy to exist. The idea of democracy is also based on the values of equality, truthfulness, humanity etc. It is very important to assimilate these values of discipline to life a better lifestyle. For a developed nation to flourish, it is important to know our Rights and Responsibilities. If every individual follows them with utmost dedication, the number of crimes taking place in the nation would slow down gradually.

In the current scenario, value-based learning is getting difficult to be followed due to the change in our living standards. With modernisation in our thinking process, we have somewhere forgotten to have the peace of mind. People lack self – motivation which is very important to be physically, mentally as well as morally strong. The definition of making right and wrong decisions in life have also changed over time. Lack of these understanding skills has led to many unwanted situations such as increasing number of suicide cases in students. Not following ethics is an accepted norm in today's time. But it was not so in the past. Hence, it is true that the ancient Indian values can counter the negative impact of the modernisation.

Medicine was an important aspect on which many Indian scholars have given different ideas and practices. The kitchen of the household served as the centre of the remedy for most of the illness. Natural elements were used to cure the deadliest disease too. Turmeric, Tulsi, neem, asafoetida, ginger, salt etc. served as remedies. Also, the diet was based on daily practices. It led to less chances of getting ill.

The modern-day surgeries are also referenced in these knowledge traditions. Sushruta is known as the father of surgery. He had performed plastic surgery of nose even before the invention of plastics using natural elements. Charak Samhita is also an important source to know about ancient medicinal practices.

Ayurveda and yoga are getting importance nowadays too due to their significant role in leading healthy lives mentally as well as physically. These practices are taking over homeopathy and allopathy medications. People have understood the importance of these practices in curing oneself completely by removing the disease from its roots through ayurvedic practices.

While getting modernised, infrastructural development has become an integral part of the sophisticated lifestyle. But to our amazement, the infrastructural development during ancient India was much more developed than in the present times.

First of all, the fine and artistic elements of architecture were created by a large number of artisans. Unlike in the modern times, where most of the work is dependent on technology, it provided employment and served as the source of livelihood for many. Secondly, the architectural structures created were built keeping in mind the sustainability of nature. Various temples preserved till date show how nature was given importance while constructing. For instance, the sun played an important role. The sun rays blazed over the deity every day. In one of the temples, the position of the sun could be seen from different windows created which actually showcased the time at that moment. Another aspect which needs to be given importance is the highly developed and sustainable design techniques. Special natural paste was applied between the rocks to join them. During the earthquakes, there have been instances of cracks on rocks but not on the joint areas of the rocks. Modern architects can create wonders if they are aware about these traditional practices. Last but not the least, science was equally

used in construction activities. One of the temples shows pillars standing without any direct contact. This was constructed based on the magnetic properties. In times when modern physics was not created, such structures were prevalent showcasing the creativity skills of ancient artisans.

Climate change and sustainability is an emerging call in the present context. But we get references about climate change right from Vedic period. This shows the advanced learning prevalent in ancient times when climate change was not even a major issue.

Our ancestors connected every important element with religion providing them with significance in everyday life. For instance, every animal was connected with some deity which resulted in their preservation and conservation. Development took place in earlier time too but nature's sustainability was also given importance, preserving it for the upcoming generations. Concern like ozone depletion was also given reference in ancient texts.

Agriculture was the main occupation during this time. It was practiced keeping in mind natural sustainability. Rainwater harvesting, use of groundwater, preserving water for irrigation through canals and wells etc. has been given importance in the ancient knowledge traditions. The present generation can do wonders in preserving the planet if the modern technologies be planned with these traditions.

In terms of advancements in the field of science, mathematics, technology, astronomy etc. our knowledge traditions were highly modernised even in comparison to the modern hypothesis. For instance, the value of pie, invention of zero, calculating eclipses etc. were very precisely in the ancient times.

The political ideologies provided by scholars such as Kautilya in his Artha shastra holds relevance in contemporary political situations. Ideologies are being taught to political thinkers from the text even today. The espionage system, land revenue administration, taxation system etc. introduced in the ancient traditions was highly developed in the past. Ethics was given importance in these texts a lot.

Although the Indian knowledge traditions serve as integral source for learning, due to westernisation of Indian culture, there are a few challenges in the process.

There are limited documents available today for the study of ancient practices. Over time, with many invasions on the land, many manuscripts got destroyed with which the primary source for learning also got destroyed. The sources available are written in very elite language. Proper interpretation of the meanings of the unsolved mysteries is required to get through the texts. Translation is required by eminent scholars by not trans – creating it as per their needs. These practices revolved around nature. Nature played an important role in the process of learning by getting a positive change in the inner self as well as outer self. Therefore, to implement such things today, certain infrastructural developments are necessary. Also, funds are required to carry out further research work on this vast topic.

With the imperial mindset being set in our mind for the past many decades, it would be difficult to change our practices all of a sudden to the older practices. A shift from the modern to traditional practices which has lost its significance over time is surely difficult but gradual practice can surely get through it.

The current knowledge system of India is highly westernised. Although the western scholars took pride in learning and following the Indian traditions, the natives felt themselves as barbaric and followed the western culture and traditions blindly- leaving behind the glorious past. This adoption of western traditions led to the disturbance of the well set ancient Indian traditions. And even today, decades after receiving independence, we are still stuck in the imperial mindset. There is a need to reflect again towards our ancient knowledge traditions. The Indian knowledge traditions are prevalent in India from time immemorial offering insights and knowledge to the past generations. It holds relevance in the contemporary times due to its unique perspective and the solutions it provides to various challenges. I firmly believe that Indian knowledge traditions offer ideas and opinions which can complement the modern thought processes. This combination would be capable of promoting a more integrated and holistic understanding of the world. Its therefore time, we look at our glorious past and move towards the process of revival for a better tomorrow for all the future generations to come. The India of the dreams of the great scholars who took India to great heights is yet to be seen. Its time the coming generations work upon ancient practices along with modern practices to achieve the best.

"Once more the world must be conquered by India. This is the dream of my life, and I wish that each one of you who hear me today will have the same dream in your minds, and stop not till you have realized the dream."

-Swami Vivekananda

Indian knowledge systems:
Relevance of Ancient Practices for Contemporary Problems

Sreenanda S Anand
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The Timeless Wisdom of Indian Knowledge Systems in Addressing Modern-Day Challenges

India's cultural heritage dating back from the ancient civilizations to the sacred Vedas has always been a boon to the society. The enduring legacy of the Indian subcontinent has never failed to attract foreigners with her beauty, mindfulness and profound richness. The Indian knowledge system (IKS) offers immense insights into health, education, societal well-being, governance Etc. These systems were deeply rooted in harmony with nature, sustainability and equitable social structures captivating the admiration of global civilizations for centuries. Yet, as Society moves forward the contrast between the timeless wisdom of the past and the pressing challenges of the present becomes starkly evident. In today's fast-paced digital era where innovation often outpaces mindfulness, we are suffocating with challenges such as, The Health crisis, Environmental degradation, social inequality, Geopolitical tensions and Gender disparities. Amidst these challenges, ancient practices focused on sustainability mindfulness and Community engagement provide a beacon of hope for bridging the gap between tradition and progress. So, in this essay, we will be discussing the timeless application of ancient solutions to tackle modern-day challenges.

Before delving deeply into the contemporary issues, a brief of the components of the Indian Knowledge System is to be known. To begin with, **Puranas** which are 18 in number are the anthologies of myth and stories which imparts spiritual and moral teachings. The philosophy in which **Sankhya, Nyaya** and **Vedanta** institutions study epistemological, ethical and metaphysical issues. While one of its main components Astronomy includes Aryabhata's research on planetary placements. Whereas the Astrology (**Jyotisha**) system determined the best times for rituals to comprehend personal fates. The fundamental idea of living a moral life and the law of cause and consequence was explained by **Dharma** and **Karma**. Ayurveda and Yoga remained the ancient medieval system and spiritual practice respectively to promote mental health and self-realization. In addition to this, the epics, the Ramayana and the Mahabharata narrate the moral, practical and ethical knowledge that still influences the cultural narrative and ideals. The other components of the Indian knowledge system include the Gurukul system, classical arts, environmental wisdom, language and linguistics, Social Sciences, Bhakti and Sufi traditions and pluralism and tolerance. Historically speaking, the Indian knowledge system has welcomed a wide range of ideologists and customs. The coexistence of all these components has made an indestructible knowledge system for India.

In today's hectic world people often compromise their life and try to fit best in the modern era which gifts them with **chronic stress and severe health issues**. The pressure of balancing work, personal responsibilities and social expectations makes them more or less similar to the machines themselves. The sedentary habits and lifestyle have also resulted in fancy ailments like hypertension, diabetes, obesity etc. Prolonged stress and poor dietary habits contribute to cardiovascular issues. Specifically, the youth's irregular routine and sleep disorders have caused insomnia and fatigue which will further affect the demography of the nation and its

productivity, thereby the GDP. As a solution to these health challenges, ancient wisdom provides holistic approaches that emphasize a balance of natural remedies and sustainable practices for overall well-being. **Ayurveda** which was discovered 5000 years ago is an ancient system of holistic healing. Among the four Vedas, Rigveda, Yajurveda, Samaveda and Atharvaveda, Ayurveda is believed to have originated from the Atharvaveda, as the Upaveda of the Rigveda. Ayurveda identifies three primary **Doshas**- **Vata** (air and space), **Pitta** (fire and water), and **Kapha** (Earth and water). Everyone has a unique combination of these Doshas. Fast foods and junkies which are consumed daily are one of the highest contributors to these lifestyle diseases. Ayurveda suggests following a diet according to one's dosha and leading a life with proper exercise, sleep and stress management as well. The Doshas are associated with different combinations of these elements. It has also identified seven primary tissues (**Dhatus**) that make up the body and three wastes (**Malas**) that need to be eliminated for optimal health. **The Agni** represents the digestive fire required for food metabolism and maintaining a healthy digestive system by preventing the toxin (**Ama**) accumulation in the body. Ayurveda also utilizes a wide range of herbs, Plants and natural substances to create remedies for health problems. It includes herbal formulations, oils, massages (**Abhyanga**) and detoxification procedures (**Panchakarma**) to restore balance. A study conducted in 2014 by the Centre for Vegetation Studies has found the ancient Indian approach in the treatment of Malaria by different means such as Ayurveda, Herbs, Yoga, Mudras etc. This shows the vastness of the Indian understanding of health which is worth following by modern science.

However, the conflict between Ayurveda and Allopathy persists regarding their relative efficiency. Atharvaveda which explains diseases such as Diarrhea, Sores, Fever, Cough, and Leprosy and its cure has also been accepted by other countries which clearly shows the importance of Indian traditional knowledge. **Sushruta**, who is considered the father of surgery (sastra karma) in his book Sushruta Samhita, has explained Rhinoplasty and Ophthalmology, translated to Arabic as **Kitab- Samural- hind- I**. Similarly, **Charaka**, the father of Ayurveda in his book **Charka Samhita** mentioned Genetics for the first time and it was spread by Buddha monks in Tibet and China in the Greek language during the 180 BC to 10 AD period also shows the acceptability of Indian culture across the globe. Recently, the Ministry of **AYUSH** (Ayurveda, Yoga & Naturopathy, Unani, Siddha, Sowa Rigpa and Homeopathy) has also taken the initiative to promote yoga which originated in 150 BC by **Patanjali**. It provides harmony and balance, flexibility and strength. Apart from important Physical health, yoga also provides mental well-being which is very important in this stressful atmosphere in which the people are being surrounded. The breath control (**Pranayama**) increases focus and the meditations impart inner peace. The COVID-19 and lockdown led a lion's share of the population to depression, mood swings and severe mental disorders and it was then that yoga gained momentum among the youth particularly. So, by integrating these ancient practices into modern lifestyles we can address the root causes of health challenges, promote harmony between mind and body and achieve a sustainable path to well-being.

Another pressing issue emerged nowadays is our **Deteriorating environment**. India is home to 63 of the 100 most polluted cities globally with **New Delhi** often cited as the capital with the worst air quality. In November 2024 Delhi experienced its worst smog crisis with its air quality index (AQI) exceeding 500 on a hazardous range leading to school closures and health advisories. The water crisis, for example, in **Chennai** in the year 2019 which resulted in the drying up of reservoirs was another major environmental problem. Also, 70% of India's surface water is unfit for consumption due to untreated sewage, agricultural runoff and industrial discharge. Rapid urbanization has resulted in the generation of over 100 million tons of solid

waste annually which leads to overflowing landfills and environmental degradation. Deforestation and climate change vulnerability have also been faced in the long run by the country. As mitigation for these alarming issues comes the Indian knowledge system.

Sacred groves are considered the ancient equivalent of natural sanctuaries where human intervention is restricted, allowing the free thriving of animals and birds. These are protected pieces of forest preserved by local communities due to their religious and cultural significance. How the sacred groves is capable of playing a significant role in environmental pollution, is the current topic of discussion. It helps to reduce pollution by acting as a carbon sink and absorbing carbon dioxide from the atmosphere. It provides clean air, water and soil and also leads to biodiversity conservation. Even though promoting and building a sacred groove in cities takes a decent amount of time, its effect would be for the long run and the ultimate aim should be the conservation of nature on a sustainable basis not only for the current generation but for the future generation too. Some of such sacred groves are the Bamboo groves of **Rajbhansi community of West Bengal**, **Orans of West Rajasthan**, **Sarnas of Chhatisgarh & Chhota Nagpur, Maw Bukhars of Khasis, Devrais of Maharashtra, Kavus of Kerala** etc. The Urban Forestry and natural ventilation along with the green infrastructure practised in **Varanasi** and **Jaipur** also shows the practical application of these techniques.

Rituals saves nature from being destroyed by human interventions to a great extent. In ancient times the river Ganga and Yamuna were worshipped and people maintained their sanctity. Practices such as dumping waste into rivers were highly discouraged. The step wells (**baolis**), and **Johads** in Rajasthan were all ancient structures built for the storage of rainwater to prevent its infiltration into soil. Reviving cultural relevance for water bodies and traditional water management systems can reduce pollution and enhance water conservation. Waste management which is a need of the hour can be done by ancient practices such as zero waste lifestyle by reusing the by-products as manure for other products in an integrated manner. Composting and natural recycling done by the communities for converting organic waste to create manure for farming and thereby avoiding waste accumulation is also highly recommendable.

India though has celebrated its 75th Independence Day proudly, the **social inequality and economic disparity** persist in the society as a thorn in the side. The top 1 percent of the population holds 22.6 percent of national income surpassing 20.7 percent recorded during the colonial era. During covid-19 pandemic 21 percent of villages denied scheduled caste's access to public health centres exacerbating health disparities in India. India's economic growth has also been slowed with only a 5.4 percent increase in output for 3 months ending in September 2024 (slowest in 2 years). The inclusive practices philosophies and governance system of Ancient India offer profound insights into addressing these social disparities. The concept of Charity (**Dana**) was deeply ingrained in ancient Indian culture. This principle can inspire modern policies such as progressive taxation, Universal basic income and Corporate Social Responsibility (CSR) initiatives. The sacred Bhagavad Gita emphasized the dignity of labour (**Karma Yoga**) urging individuals to focus on their duties without discrimination. Rigveda written in the Early Vedic period showcases the participation of women in education, governance and religious rituals. Also, the panchayat system that existed in ancient India ensured participating governance and equitable decision-making at the grassroots level. **Chanakya's Arthashastra** has also explained and codified sustainable economic management and resource allocation which can be implemented in present-day governance with the removal of corruption in administration. The principles of nonviolence (**ahimsa**) and truth force

(**Satyagraha**) rooted in **Jainism** and **Buddhism** also emphasize peaceful resolution of conflicts and advocacy for Social Justice through nonviolent protest and community dialogue reflect this ethos.

Disparities in Indian education arise due to its main focus on grades rather than creativity by giving over emphasis on rote learning. So, a more practical approach can be included which makes the education multi-disciplinary. In ancient times they learned Astronomy, Metallurgy etc. by practice. **Nagarjuna** was a well eminent Alchemist, believed to have lived in the bronze age who converted base metal to Gold nowadays the 'Elixir of life' as perceived by the people. In modern curriculum fieldwork and internship can be made compulsory for all courses for immediate hands-on experience rather than monotonous theory mugging.

Astronomy (**Khagol shastra**) which comes under mathematics (**Ganita**) along with its other components such as arithmetic algebra geometry and astrology was one of the main areas of interest of ancient scholars. In 2023 India's Wednesday rise in interest in space science with ISRO Chandrayaan 3. The Light Pollution hindered observation in urban areas and affected the public interest as well. **Aryabhata** who lived in 499 AD wrote **Aryabhatiya** in Sanskrit which talks about Maths and Astronomy and the accuracy of calendars, climate, rainfall, navigation, horoscope, trade and stars. The Arabs called Maths as Indian art (**Hindisat**) which means this area was entirely new for the outsiders and the whole West was bound to India. The discovery of zero (**Shunya**) by **Brahmagupta** (7th century AD) is explained in **Brahmasputa Siddhanta**. ISRO launched the Bhaskara I satellite in 1979 in Tribute to **Bhaskara I** who is the author of **Aryabhatiya Basya**. One among the 9 gems of the court of **Vikramaditya** the great **Varahamihira** through his Earth-cloud theory in **Brihat Samhita** has given the precautions, prevention and signs to be taken care of during an unusual cloud formation or earthquake. Also building observatories in isolated areas for example, **Jantar Mantar**, establishing dark Sky receives in rural areas providing astronomy education, promoting **Planetariums** to increase awareness of the people etc. can be done to tackle these problems utilizing the Indian knowledge system.

In the 6th century BC **Kanada** and **Paguthakatyayana** invented the atom (**Paramanu**) and Kanada discovered **Kana** which means can't split further. These later become the inoculums of nuclear weapons to use against the countries in wars. The ongoing **Geopolitical tension**, border conflicts and internal unrest in **Manipur** in North East state of India have questioned the efficiency of Indian governance and administration. The ideological differences between **Meitei** and **Kuki** tribe, resource competition etc. have led to these unending conflicts. But it's high time to resolve disputes to regain a peaceful India. In the ancient text of Arthashastra by Chanakya, Strategies for Diplomacy (**Mantra Shakti**) and alliances (**Sandhi**) are mentioned. Also in the epic **Mahabharata** moral implication of the war and righteous conduct is discussed. Based on this Indian government can focus on proactive diplomacy, third-party mediation, emphasis on **Dharma** and inspiring people for justice and harmony over aggression as per the ancient assembly (**Sabhas**) by settling up matings with the heads of both the conflict groups. **Shanti Parvah** from Mahabharata mentions the reconstruction after the war, The Unity building which is very much essential in those insurgency areas.

The annual crime in India reports as per National Crime Bureau (**NBC**) records has a separate section on **crimes against women**. Between 2014 to 2022 reported crimes against women hiked by 31 percent. According to the George Town Institute 2023 Women peace and security index the score of India out of 1 is 0.595, Placing it in 128 ranks out of 177. The gender pay

gap as per data from the **World Economic Forum** of 2023 shows India's position as 146 out of 156. These data clearly show that India hasn't yet reached the so-called gender equity, instead, the violence and atrocities against women have only increased. The early Vedic period portrays women as equal to men. They were involved in public sabhas and were educated which is mentioned in **Katyayana** and **Patanjali**. Women married at a mature age as per their own choice by **Swayamvar** according to Rigveda scripts. The idols of God and Goddesses were depicted with equal importance to both genders. Even in the practice of fire ritual (**Homa**) offerings to fire, every Sloka is addressed to **Swaha** the wife of **Agni** instead of Agni himself. During the Gupta period, **Chandragupta 1** ruled The Kingdom jointly with his queen **Kumara Devi**. Ancient History has shown a vast number of examples showing that gender equality existed. Then from where did we start to view women as subordinate to men? Why did we start to protest for the rights of women while both genders were equal in ancient India? Even though it is painful and heartbreaking to cry for security, freedom and equity for women in this 21st century or the so-called 'century of hyper innovation' we should seriously look back into the ancient literature and texts and adopt the values from the present life to rebuild society with no more gender atrocities.

In conclusion the challenges of the 21st century- **spanning health crises, environmental degradation, socio-economic disparities, educational gaps, gender inequities, and geopolitical conflicts**—underscore the need to revisit and integrate ancient solutions alongside modern advancements. By blending the ancient wisdom of IKS with modern innovation, we can create solutions that are not only effective but also sustainable and culturally rooted. Organizations like the United Nations and other international bodies can play a pivotal role in guiding nations toward shared solutions, while local communities and individuals must also take responsibility for change. As we look ahead, it is imperative to recognize the value of these age-old systems and integrate their principles into the framework of modern problem-solving for a more harmonious and equitable future.

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Indian Knowledge System
(Jnanam Vande)

Ujjwal Kumar

"I bow to knowledge."

The development of the Indian Knowledge System (IKS) spans thousands of years, covering a wide range of disciplines such as philosophy, science, literature, art, mathematics, medicine, and astronomy. This system is deeply embedded in ancient texts, oral traditions, and institutionalized learning practices like gurukuls and universities. Over millennia, IKS has evolved to include profound philosophical insights, scientific discoveries, literary works, artistic expressions, mathematical theories, medical practices, and astronomical observations, all of which have collectively contributed to its rich and diverse heritage. It reflects a holistic approach to knowledge, integrating spiritual and practical understanding, and continues to influence contemporary thought and practices. The Indian education system has undergone significant changes, evolving from informal home-based learning to structured institutions, both private and state-sponsored. Key drivers of this evolution include colonialism and westernization, influenced by globalization and capitalism. During the colonial era, the British established formal educational institutions to meet their administrative needs, promoting western knowledge, languages, and cultural norms. This led to the marginalization of traditional Indian education systems.

The Indian National Education Policy (NEP) 2020 marked a major shift by incorporating Indian knowledge systems into the curriculum. It recognizes the importance of preserving and advancing India's rich legacy in philosophy, language, science, and the arts. The NEP encourages the next generation to appreciate the value of traditional knowledge. The term "Indian Knowledge System (IKS)" in the NEP differs from the indigenous knowledge system. The policy emphasizes knowledge from ancient India and its contributions to modern India, somewhat neglecting the indigenous knowledge from the Muslim rule in India. Nevertheless, it highlights the use of traditional learning methods and tribal knowledge, with a focus on ancient knowledge. This study aims to explore how traditional Indian knowledge systems can rejuvenate the education system. It examines ancient knowledge systems and explores ways to integrate them into the current educational framework.

Vidya Dadati Vinayam, Vinayad Yati Patratam. Patratvad Dhanamapnoti, Dhanad Dharmam Tatah Sukham.
It means that knowledge imparts humility, which makes a person worthy. This worthiness brings wealth, not just in material terms but also in respect and valuable relationships. With wealth, one can perform righteous deeds, which in turn lead to true happiness. This cycle emphasizes the importance of knowledge, humility, and virtuous actions, highlighting how they collectively contribute to personal fulfilment and societal well-being. The shloka encourages us to seek knowledge for the broader purpose of contributing positively to the world and achieving lasting happiness and fulfilment.

The onset of the Vedic age coincided with the decline of the Indus Valley civilization (Harappan Culture), although the exact role played by the Aryans in the eventual collapse of the Indus civilization remains unclear. The principal difference between the Harappan Culture

and the Vedic Culture is rooted in their societal structure The Indus Valley civilization was predominantly urban, with people actively engaged in trade and commerce. The study of the Vedic Age relies on a variety of sources. The primary source for the study of the Vedic Age is the Vedic Literature which can be classified into Early or Shruti Vedic Literature Land Later or Smriti Vedic Literature. Archaeological findings, including pottery and tools, illuminate material culture and trade, while inscriptions provide historical data, Excavations in major Vedic civilization sites such as Hastinapur Bhagawanpura, Delhi (Indraprastha), have given great insight into the life of Vedic people. Comparative linguistics further aids in tracing linguistic and cultural transformations during this pivotal period, allowing historians to construct a comprehensive understanding of the Vedic Age.

The Vedic age (1500 BC to 600 BC) saw the composition of the Vedas by the Aryans, divided into the early and later Vedic periods. The early period featured hymns and simple rituals, while the later period saw advanced social structures and religious practices. In the 19th century, Aryans were seen as a distinct race, but now they are understood as a linguistic group who spoke Indo-European languages, leading to Sanskrit, Latin, and Greek. There is a great example because knowledge should utmost important in human life. It's a vail which distinguish between animals and humans.
Na Choura Haaryam Na Cha Raaja Haaryam, Na Bhraatribhaajyam Na Cha Bharkari,

Vyaye Krte Vardhate Eva Nityam, Vidyaa Dhanam Sarva Dhana Pradhaanam.
"Knowledge cannot be stolen by thieves, seized by kings, divided among brothers, or burdened by weight. The wealth of knowledge increases the more it is given away. This wealth is the most superior among all riches." If anybody is blessed with knowledge no one can defeat him.

My insight is to infuse Vedic age education more with modern system. The early Vedic period is important to the Indian Knowledge System because it gave rise to the Sanskrit language. Sanskrit stands out for its grammatical precision, rich vocabulary, phonetic clarity, and algorithmic nature, making it ideal for computational use. Its rule-based structure, codified by Panini, ensures systematic and unambiguous communication. The concept of anuloma-viloma verses, where a shloka tells different stories depending on the reading direction, was introduced by Venkatadhvari in his work "Raghava-yadaviyam." Aryabhata (476-550 CE) was a pioneering mathematician and astronomer who introduced the concept of zero, calculated pi as 3.1416, and made significant advancements in trigonometry. He also proposed that the Earth rotates on its axis and that the moon and planets shine due to reflected sunlight.

The study of the Vedic age relies on multiple sources. The primary sources are Vedic literature, divided into Early (Shruti) and later (Smriti) Vedic literature. Archaeological findings like pottery and tools reveal material culture and trade, while inscriptions provide historical data.
Shruti Vedic literature includes the Vedas, Brahmanas, Aranyaka's, and Upanishads, which were orally transmitted for centuries before being compiled into written texts. The Vedas, consisting of hymns, prayers, charms, litanies, and sacrificial formulas, are divided into four collections: Rigveda, Yajurveda, Samaveda, and Atharvaveda. Some scholars also recognize Bharata Muni's "Natyashastra" and the Mahabharata as the Panchama Veda. Maharishi Ved Vyasa is renowned as the compiler of the Vedas and the author of the Mahabharata, which includes the Bhagavad Gita. The Bhagavad Gita, a part of the Mahabharata, contains 700 shlokas and is considered one of the most sacred texts. There is one powerful shloka in Geeta of Chapter 5, Verse 18:

Na Hi Jnanena Sadrisham Pavithram Iha Vidyate, Tatswayam Yoga-Samsiddhah Kalenatmani Vindati

"In this world, there is nothing as purifying as knowledge".

Smriti literature encompasses texts like Vedangas, sutras, puranas, epics, Darshanas, and Upavedas, covering laws, customs, and the societal status of women. "Vedanga" translates to "the limbs of the Vedas," encompassing six disciplines that aid in understanding the Vedas: Shiksha (phonetics), Kalpa (rituals), Vyakarana (Sanskrit grammar), Nirukta (etymology), Chhanda (metrics), and Jyotisha (astronomy and astrology). The six schools of Indian philosophy, known as Shad-Darshana, each teach important life virtues: Nyaya (logic and realism by Gautama), Vaishesika (atomic theory by Kanada), Purvamimansa (ritualism by Jaimini), Sankhya (knowledge for liberation by Kapila), Yoga (meditation and physical discipline by Patanjali), and Uttaramimansa (Upanishadic teachings by Bhadarayana). These texts and philosophies provide a structured approach to understanding the Vedas and the nature of the universe, emphasizing the importance of rituals, meditation, logic, and knowledge for achieving liberation.

The Upavedas are supplementary texts to the primary Vedas and hold a significant place in Vedic literature. There are four main Upavedas: Dhanurveda, which deals with the art of warfare and is associated with the Yajur Veda; Gandharva Veda, which focuses on art and music, related to the Sama Veda; Shilpa Veda, which covers architecture and is linked to the Atharva Veda; and Ayurveda, which concerns medicine and is associated with the Rig Veda. Dharma Shastras serve as the source of religious law for Hindus, with eighteen main Smritis, the most important being those of Manu, Yajnavalkya, and Parasara. The education system during the Rig Vedic age was primarily oral, with students learning from their teachers through recitation and memorization in a gurukul or school. Women held respected positions and enjoyed certain freedoms, with some composing hymns and engaging in Vedic studies as Brahmavadinis. Notable female scholars from this period include Lopamudra, Gosha, and Apala. The education system was free from caste discrimination, highlighting its inclusive nature.

Early Vedic education system was much better than these days whether bring devoid of technologies like today. This education was primarily divine era where guru were on the top of respect table. Use of Upanishads which meant, "sitting at foot of" guru to get knowledge. They are in pros as well as verse formal Upanishads talk about the philosophical concepts and principles such as Karma (right-action)) Atman (true self or soul) Brahman (ultimate reality) and moksha (liberation from the birth and death cycle). They also contain Vedic doctrines that explain the process of self-realization through practices such as yoga and meditation. They hold significant importance as the foundation of Hinduism and influenced later Indian philosophies and religions such as Jainism and Buddhism.

As mentioned earlier Indian knowledge system not much influenced by Mughals. Nalanda university which can be called as golden treasure of education in world which attracted the students from Java, Tibet, China, and possibly even Mongolia and Korea. This renowned Buddhist mahavihara (great monastery) operated from 427 CE until the 13th century, playing a vital role in promoting the patronage of arts and academics. In 1193 by Bakhtiyar Khilji, a general of the Turkish ruler Qutbuddin Aibak. Khilji's campaign was part of a broader strategy to expand Islamic influence and suppress other religious and cultural practices destroyed our golden treasure Nalanda university, which made a havoc lost of culture, history, ayurveda, science, economics & many more.

"Knowledge is the true treasure, more precious than the Kohinoor, for it enlightens the mind and enriches the soul."

There was a famous British ruler in India Thomas Babington Macaulay once said "Are we to keep the people of India ignorant in order that we may keep them submissive? Or do we think that we can give them knowledge without awakening ambition? Or do we mean to awaken ambition and to provide it with no legitimate vent?" therefore he made all possible ways to destroy our root Vedic education system.

Therefore, Imagine the Indian education system as a tree. Initially, it grew naturally, with informal learning at home (like the roots). Over time, colonialism and westernization pruned and shaped the tree, introducing formal education (like structured branches). The NEP 2020 is like a gardener who appreciates the old roots (traditional knowledge) and wants to ensure the tree flourishes by combining ancient wisdom with modern education (new branches and leaves).

Modern Indian knowledge system more driving towards Vedic era and it should. Post independent era lagged many good teachings system was a great loophole that we can still feel today.

Modern education system is era is much more influenced by digital platform. Digital transformation and online classes have significantly improved the Indian education system by making it more accessible, flexible, and cost-effective. These advancements break down geographical barriers, provide interactive learning experiences, and offer equal opportunities to marginalized communities. Digital tools and platforms help preserve ancient texts, promote traditional practices like Ayurveda and yoga, and facilitate advanced research. By integrating digital literacy and global exposure, the Indian education system is better preparing students for the modern workforce, ensuring a blend of modern and traditional learning. Platforms like YouTube, online classes, and Unacademic have contributed to sharing knowledge across the country. Notably, Alakh Pandey has made physics education affordable for JEE and NEET aspirants, and Khan Sir has provided affordable UPSC coaching. This progress is largely due to digital transformation.

The modern Indian education system is now more formal and often owned by private and state bodies, focusing more on theoretical knowledge rather than practical skills. Students prioritize grades over genuinely understanding and incorporating knowledge. Education has become a business, as seen in Kota, known for its competitive exam coaching centres like NEET and JEE, attracting numerous students. This has led to high pressure and rising suicide rates among students. According to the National Crime Records Bureau, student suicides increased by 4% annually. Depression is a significant issue among the youth, with a 2021 UNICEF survey showing that 14% of 15 to 24-year-olds in India frequently feel depressed or disinterested. The World Health Organization reported in 2015 that 4.5% of the Indian population, around 56.7 million people, were affected by depressive disorders. Thereupon digital platform especially social media use should be legalized and used in affirmative way. They should be content and age restriction on using social media. As what we see; thereby we become.

In my view, the post-independence education era was not very effective in imparting knowledge. The system focused more on formalizing education, and while it evolved technologically, it lagged in enhancing knowledge. In the Vedic period, teachers were highly respected and referred to as "Gurus." Nowadays, students often lack basic ethics, social responsibilities, honesty in their studies, and moral values. The GenZ generation is particularly

affected by depression and mental stress, partly due to excessive social media use. This generation tends to seek quick success and fame, ignoring the long-term consequences. Therefore, I suggest implementing age regulations for social media use and emphasizing the importance of gaining knowledge over accumulating superficial achievements.

Imagine the Indian education system as a tree. Initially, it grew naturally, with informal learning at home (like the roots). Over time, colonialism and westernization pruned and shaped the tree, introducing formal education (like structured branches). The NEP 2020 is like a gardener who appreciates the old roots (traditional knowledge) and wants to ensure the tree flourishes by combining ancient wisdom with modern education (new branches and leaves).

Educational institutions play an important role in keeping and sharing the Indian Knowledge System (IKS). When they include IKS in their curriculum, they make learning better, help students appreciate their culture, and connect ancient wisdom with modern knowledge. The Indian government's SWAYAM initiative offers IKS courses through top institutes to teach India's rich heritage and sustainable practices. IIT Gandhinagar offers comprehensive courses on IKS, covering topics like Vedanta, Ayurveda, and classical arts. Recognizing that IKS is important globally, institutions should use this holistic approach to empower future generations. To successfully integrate IKS, a collaborative and adaptive approach is needed to address challenges and meet the evolving needs of students.

In consequence I would like to share my view that there is nothing more treasures excavating it in deep into minds of society which will help to flourish an optimistically motivated society just like Japan (called most honest and best society of world, student gain their knowledge by preserve of its culture and heritage).

Vidyaa Naam Narasya Roopam Adhikam Prachhanna Guptam Dhanam,
Vidyaa Bhogakari Yashah Sukhakari Vidyaa Guruunaam Guru
"Knowledge is a man's greatest beauty, a hidden treasure, the giver of pleasure, fame, and happiness, and it is the greatest teacher of teachers."
Jnanena Tu Kaivalyam
"Through knowledge comes liberation."

Indian Knowledge System Relevance of Ancient Practices for Contemporary Problems

14

Vartika Barvadiya

Centuries ago, where world was still discovering the ways to understand life and nature, India had already developed rich system of knowledge that has every aspect of human life. India's traditional wisdom still has much to teach us about life, nature and learning. In today's fast-growing world, where we are busy with technology and new innovations and neglect our culture and tradition. The Indian Knowledge Systems of the Ministry of Education (MoE) was established in October 2020.This was established to fill the gap between the traditional Indian knowledge systems and contemporary knowledge systems.

Three Fundamental Principles of IKS are:
- PARAMPARA(Tradition)
- DRSTI (Vision or Perspective)
- LAUKIKA-PRAYOJANA (Worldly Utility)

Here, Parampara refers to the transmission of knowledge, customs, and practices from one generation to another, ensuring the preservation of cultural, spiritual, and philosophical traditions over time. It plays a vital role in maintaining continuity, especially in fields like education, religion, and art, where oral or written transmission has kept ancient wisdom alive. On the other hand, Drsti signifies perspective or vision, reflecting the philosophical or spiritual lens through which an individual interprets the world. It highlights the diverse worldviews offered by different schools of thought, such as Advaita Vedanta or Buddhism, shaping how reality and existence are understood. Lastly, laukika-prayojana pertains to worldly utility, focusing on the practical benefits and real-world applications of knowledge or actions. For instance, the use of Ayurveda for health and the application of ethical principles like non-violence for societal well-being outcomes as philosophical and cultural practices. Together, these concepts emphasize the balance between preserving tradition, shaping individual perspectives, and ensuring practical relevance.

The IKS covers a wide range of fields like ancient engineering, science, technology, architecture, health, wellness, psychology, arts, music, dance, public administration, and governance. It is a treasure of knowledge that has various domains. Its content reflects the intellectual and cultural achievements of ancient India.

It contains philosophy and spirituality, with foundational texts like VEDAS and UPANISHADS and BHAGVAD GITA their teaching remains relevant in modern contexts, addressing universal question about life, existence, and morality along with ethical thought. The Vedas, Upanishads, and the Bhagavad Gita are foundational texts of Indian philosophy and spirituality, each serving distinct roles in understanding the essence of existence and the divine. The Vedas, considered the oldest sacred scriptures of Hinduism, are a collection of hymns, rituals, and philosophical teachings, divided into four main texts: Rigveda, Yajurveda, Samaveda, and Atharvaveda. They primarily focus on rituals, cosmic order, and hymns dedicated to various deities. The Upanishads, often called the Vedanta or the "end of the Vedas," delve into metaphysical questions and explore the nature of the self (Atman) and ultimate reality (Brahman). They emphasize knowledge (Jnana) as the path to liberation (Moksha). The Bhagavad Gita, a 700-verse philosophical discourse within the Mahabharata, is a dialogue

between Prince Arjuna and Lord Krishna. It synthesizes the paths of devotion (Bhakti), action (Karma), and knowledge, providing practical guidance on living a righteous life while fulfilling one's duties. Together, these texts form a comprehensive framework for spiritual exploration and self-realization. Practices like YOGA and MEDITATION promotes physical, mental and spiritual well-being. Ethical Principles such as DHARMA (duty) and KARMA (action and their consequences) forms a moral foundation of IKS. Yoga, meditation, dharma, and karma are interconnected spiritual practices that aim to promote inner peace, self-awareness, and ethical living. Yoga is a discipline that combines physical postures (asanas), breath control (pranayama), and meditation to harmonize the mind, body, and spirit. Meditation is a mental practice aimed at cultivating mindfulness, focus, and deep inner stillness, often used in yoga to enhance self-awareness and connection to the present moment.

Dharma refers to the ethical and moral principles that guide an individual's life, aligning one's actions with righteousness, truth, and purpose. Karma is the law of cause and effect, suggesting that every action has consequences, and it is through right actions in accordance with dharma that one can cultivate positive karma, leading to spiritual growth and liberation. Together, these concepts form a holistic approach to spiritual development, emphasizing the importance of both internal discipline and external ethical behavior.

IKS has also includes significant contribution to science and mathematics, such as the decimal system, the invention of zero, advancement in algebra, trigonometry, and calculus. Vedic Mathematics, rooted in the Indian Knowledge System (IKS), is an ancient mathematical framework derived from the Vedas, particularly the Atharvaveda. It comprises a set of techniques or sutras that simplify arithmetic calculations, algebra, geometry, and other mathematical operations. Popularized by Bharati Krishna Tirthaji in the 20th century, Vedic Mathematics is based on 16 sutras (aphorisms) and 13 sub-sutras that offer intimate and efficient methods for solving complex problems. Techniques like "Vertically and Crosswise" for multiplication, "Nikhilam" for subtraction, and "Paravartya" for division enable faster and more accurate calculations. Vedic Mathematics emphasizes mental agility, pattern recognition, and holistic thinking, making it an invaluable tool for students and scholars. Its relevance in modern education lies in its ability to enhance computational skills and promote an intimate understanding of numbers. Vedic science is a vast body of knowledge rooted in the ancient Vedic texts, primarily the Vedas, which are considered the oldest sacred scriptures of India. It encompasses a wide range of disciplines, including mathematics, astronomy, medicine, philosophy, and spiritual practices. Vedic science integrates the understanding of the natural world with spiritual wisdom, emphasizing harmony between the material and spiritual realms. It views the universe as an interconnected system governed by universal laws, where consciousness and energy play central roles. Vedic science incorporates concepts like Ayurveda (traditional medicine), Jyotisha (astrology), and Vastu Shastra (architecture), all of which aim to promote physical, mental, and spiritual well-being. It also includes profound insights into the nature of the self, the universe, and the ultimate reality, often seeking to answer questions about existence, consciousness, and the purpose of life. The principles of Vedic science encourage holistic living, balance, and alignment with cosmic laws. Astronomical calculations found in texts like ARYABHATIYA and SURYA SIDDHANTA which demonstrates the precise calculations of planetary motion and eclipses. In the medical field, Ayurveda is a holistic health system which focuses on balancing the body, mind, and spirit, along with traditional practices like SIDDHA and UNANI. Unani and Siddha are traditional systems of medicine that originated in India, each with distinct philosophies and approaches to health and healing. Unani medicine, influenced by Greek, Persian, and Arab traditions, is based on the concept of

balancing the body's humors blood, phlegm, yellow bile, and black bile. It emphasizes the importance of diet, herbal remedies, and lifestyle changes to maintain health and treat diseases. Unani practitioners diagnose and treat illnesses by focusing on restoring harmony within the body and mind, often using natural substances and therapeutic practices like cupping, massages, and diet regulation. Siddha medicine, on the other hand, is one of the oldest systems of healing in India, rooted in Tamil culture. It is based on the concept of balancing the three dosha - vata, pitta, and kapha through the use of herbs, minerals, and specific treatments like meditation and yoga. Siddha focuses on the body's energy and the interconnectedness of the physical, mental, and spiritual aspects of health, aiming to purify the body and mind for spiritual and physical well-being. Both systems emphasize individualized treatment and holistic care, integrating lifestyle practices and natural therapies. This system is still relevant and inspire natural healing practices globally. Languages and Literature are represented in classical languages like SANSKRIT and PRAKRIT, as well as in epics like the Mahabharata and Ramayana that provides moral, spiritual and historical lessons. Sanskrit and Prakrit are two significant languages in ancient Indian linguistic history, each playing a vital role in the development of Indian culture and literature. Sanskrit, often referred to as the "language of the gods," is a highly structured and refined language, codified by Panini in his grammar treatise Ashtadhyayi. It served as the ritual language of Hinduism and the medium for classical literature, philosophy, and sciences. Prakrit, on the other hand, was a group of informal languages used by the common people. Simpler and more accessible than Sanskrit, Prakrits were employed in early Jain and Buddhist texts, as well as in dramatic works like those of Kalidasa, where characters of lower status spoke Prakrit. Together, Sanskrit and Prakrit illustrate the linguistic diversity of ancient India, reflecting its complex social, cultural, and literary traditions.

The arts and culture of IKS includes classical music and dance forms such as BHARATNATYAM and KATHAK, as well as complicated sculptures, temple carvings, and traditional paintings highlights the aesthetic sensibilities and craftsmanship of ancient Indian artisans which continues to bloom and preserves the cultural identity of India. There are architecture and engineering achievements such as the unique styles of temple architecture, the urban planning of ancient cities like Mohenjo-Daro, and innovative water management system like stepwells demonstrates India's advanced technical knowledge. Mohenjo-Daro, one of the prominent cities of the Indus Valley Civilization (2600–1900 BCE), showcases the advanced urban planning and engineering skills of the ancient inhabitants. Situated in present-day Pakistan, the city was designed on a grid pattern with well-organized streets and residential areas. It featured a sophisticated drainage and sewage system, indicating a focus on hygiene and public health. The presence of the Great Bath, granaries, and standardized brick structures highlights its socio-economic and cultural significance. Artifacts such as seals, pottery, and tools reflect a thriving trade network and skilled craftsmanship. Mohenjo-Daro remains a testament to the creative and complexity of one of the world's earliest urban civilizations. Economics and governance systems, as described in the Arthashastra provides perception about statecraft, trade, taxation, offering lessons on effective governance and sustainable economic practices. The Arthashastra, attributed to the ancient scholar Chanakya (Kautilya), is a comprehensive treatise on statecraft, economics, politics, and military strategy, written around the 4th century BCE during the Maurya Empire in India. It provides detailed guidance on governance, administration, diplomacy, law, and public welfare, emphasizing the role of a strong and just ruler. The text outlines strategies for managing resources, conducting trade, taxation, and maintaining internal and external security. It also discusses spying, alliances, and warfare, showcasing its practical and realistic approach to leadership and governance. The

Arthashastra remains a timeless work, reflecting the sophistication of ancient Indian political and economic thought. Environmental knowledge was another remarkable aspect of IKS, as ancient Indians practiced sustainable agriculture, water conservation, and biodiversity preservation. Sacred groves and rituals often ensured the protection of natural resources, demonstrating an ecological awareness far ahead of its time.

The education system in ancient India was designed to develop the individual holistically. The Gurukul system emphasized personalized learning under the guidance of a teacher, focusing on both practical skills and moral values. Institutions like Nalanda and Takshashila were renowned centers of learning that attracted students from across the world. These institutions showcased a multidisciplinary approach to education, integrating science, philosophy, arts, and linguistics. Takshashila and Nalanda were two ancient centers of learning in India, renowned for their academic and intellectual contributions. Takshashila, located in present-day Pakistan, thrived from around the 5th century BCE to the 2nd century CE. It was a hub for students from across Asia, offering a diverse range of subjects such as philosophy, medicine, military science, and languages. Nalanda, established in the 5th century CE in present-day Bihar, India, was a Buddhist monastic university that became one of the most advanced learning centers of its time, attracting scholars from all over the world. It had a vast library, thousands of students and teachers, and specialized in fields like Buddhist philosophy, mathematics, astronomy, and medicine. Both institutions played a significant role in preserving and spreading knowledge, and their legacies continue to inspire modern educational systems.

The IKS has been introduced in modern education to reconnect students with India's rich heritage and to provide holistic ways that complements contemporary learning. It will help to preserve cultural heritage, it has the solution for modern challenges for example global issues like environmental sustainability, health and well-beings of human can be solved practically from principle such as sustainable agriculture, Ayurveda, Yoga and water management. It also provides multidisciplinary thinking by mixing science, mathematics and philosophy which helps students for problem solving and inspire them to for innovative thinking. It helps us to acknowledge the contribution of Indian scholar to global knowledge. Dharma and Karma help students to have values and sense of responsibility. It makes them understand the importance of diverse perspectives and make them ready for global competition. IKS encourage them for research and helps them to value their cultural legacy and its global significant. IKS are formed by some traditional knowledge or process some of the examples are:

- By observing the Environment - Farmers observing rainfall patterns over years to determine the best planting seasons.
- Experiential Learning - Discovering medicinal plants through experimentation and documenting their effects on health.
- Spiritual and Cultural Integration - Using rituals to ensure sustainable hunting or fishing practices, believing it maintains harmony with spiritual forces.
- Societal Interaction and Collaboration - Artisans sharing techniques for crafting tools or weaving fabrics.
- Adaptation to Challenges - Developing drought-resistant crops or water-harvesting techniques in response to arid conditions.
- Oral Transmission and Documentation - Folktales that encode agricultural advice or ethical guidelines for resource use.
- Interaction with External Knowledge System - Indigenous communities adopting and integrating new farming tools introduced by traders or explorers.

- Preservation through Rituals and practices - Seasonal festivals celebrating harvest cycles also serve to pass agricultural knowledge to younger generations.

As a college student, I believe the Indian Knowledge System (IKS) offers a valuable, holistic approach to education. It integrates ancient wisdom with modern challenges, promoting sustainable practices like Ayurveda and water conservation, which are crucial in today's world. The ethical principles of *Dharma* and *Karma* foster responsible decision-making and mindfulness. IKS also emphasizes mental, physical, and spiritual well-being through yoga and meditation, helping us cope with stress. By incorporating IKS into modern education, we can preserve cultural heritage while finding practical solutions to global issues, preparing future generations for ethical, innovative, and sustainable living.

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Indian Knowledge System
(Krishna Vande Jagadguru)

Kumari priya

The term Indian knowledge system referred to new education system of India which is really different from indigenous knowledge system but it will be highly influenced from ancient Vedic period. New education system is highly influenced from westernization & colonization. But legitimately from my point of view Vedic era was the best knowledge giving system & shaped the society very well. Therefore, first we should know how & what was the actual role.

Vidyaa Naam Narayan Roopam Adhikam Prachhanna Guptam Dhanam, Vidyaa Bhogakari Yashah Sukhakari Vidyaa Guruunaam Guruh. "Knowledge is a man's greatest beauty, a hidden treasure, the giver of pleasure, fame, and happiness, and it is the greatest teacher of teachers." A well-organized knowledge system is not just about storing information; it's about creating a framework that facilitates learning, innovation, and societal progress. Such a system is the backbone of an enlightened and informed society, capable of tackling challenges and seizing opportunities for growth and development The decline of the Harrapan civilization was a significant turning point in the history of the Indian subcontinent and marked the advent of the semi-nomadic & pastoral Aryans. This transition gave rise to what is known as the "VEDIC AGE", named after the Vedas, the oldest and most revered texts in Hinduism. The vedic age spans from around 1500 BC to 600 BC, during which the Vedas were compose by the Aryans. The age is commonly divided into two distinct periods: the early Vedic period & the later Vedic period. The early Vedic period, known for its early hymns & rudimentary rituals, was followed by later Vedic period, witnessed the maturation of social structure and a development of religious practices.

In 19th century, Aryans were considered as a distinct race. However, contemporary understanding views them as a linguistics group of individuals who spoke the Indo-European language, from which languages like Sanskrit, Latin & Greek involved. The linguistic connection becomes apparent through the similarities in sound & meaning found in words across these languages. For example, the Sanskrit words "Matri" & "Petri" bear resembles to the Latin "mater" & "pater".

The study of the Vedic age relies on a variety of sources. The primary source for the study of the Vedic age is the Vedic literature, which classified into Early or Shruti Vedic literature & later or smriti Vedic literature. Archeological findings, including pottery & tools, illuminate material culture & trade, while inscriptions provide historical data.

Shruti Vedic comprises of Vedas, brahmans, Aranyaka's, & Upanishads which were orally transmitted for many centuries and later complied into written text. The Vedas are collection of hymns, prayers, charms, litanies & sacrificial formulae. There are four Vedas: Rig Veda, yajur Veda, Sama Veda & Atharva Veda. One of the most debated recognized Veda, Bharat Muni's" Natyashastra" or Mahabharat as Panchama Veda by many scholars. The most famous guru of Vedic literature is Maharishi Ved-Vyas. He is revered as the compiler of the Vedas and the author of the Mahabharata, which includes the Bhagavad Gita. Bhagwat Geeta (part of Bhismhaparva of Mahabharata) most sacred book ever existing on earth comprising the most holy & solstice book. It consists of 700 shlokas in the books which has enlighten many famous personalities in Bharat like swami Vivekanand, Dr. APJ Abdul kalam and list will never end.

One of the most famous shlokas from the Bhagavad Gita that addresses the importance of knowledge and enlightenment is from Chapter 4, Verse 34:

Tadviddhi Pranipatena Pariprashnena Sevaya, Upadekshyanti Te Jnanam Jnaninas Tattva-Darshinah.
"Learn the truth by approaching a wise guru, inquiring from them with humility and rendering service unto them. The self-realized souls can impart knowledge unto you because they have seen the truth."

On another hand "the smriti literature" includes -Vedangas, sutras, puranas, epics, Darshana & upavedas. This literature deals with the laws & usage of customs of various classes. They also throw light on status of women in society. Vedangas and Sutras

The term "Vedanga" can be literally translated as "the limbs of the Vedas." It refers to a set of six disciplines that are closely associated with the study a and understanding of the Vedas. The six Vedangas are: Shiksha (study of sounds and pronunciation (Phonetics) of Vedic hymns). Kalpa (practical, ceremonial, sacrificial and ritual aspect of the Vedas). Vyakarana (Sanskrit grammar used in Vedic hymns). Nirukta (etymology (study of origin of words) of the words used in Vedas). Chhanda (metrics (pattern in which one must recite any mantra)). Jyotisar (astronomical &astrological aspects of fixing auspicious dates.)

There are six schools of Indian philosophy, known as Shad-Darshana. They all propagate the virtues of life. Nyaya by Gautama-It is a school of logic and realism it held that liberation is gained through right knowledge. Vaishesika by Kanada (It postulated that all the objects in the physical universe are reducible to 'paramanu' (atom). It held that knowledge and liberation was achievable by fully recognizing the atomic nature of the Universe and its difference from the soul. This atomic theory marked the beginning of Physics in India.) Purvamimansa by Jaimini-It regards Vedas as eternal and rituals are of primary importance. Thus, it recommended the performance of Vedic rituals and sacrifices to attain salivation (ritualism). Sankhya by Kapila-It has no faith in existence of God. It held that world was created and evolved by Nature/Prakriti. It further asserts that soul can attain liberation only through real knowledge that is to be acquired through observation and inference. Yoga by Patanjali-It believes in salvation through meditation and physical application. It had influenced the development of physiology and anatomy in ancient times. Uttaramimansa by Bhadarayana-It is the summary of the teachings of the Upanishads dealt with metaphysical concepts like Atama-brahma, karma doctrine, meditation, devotional Hinduism etc.

The Upavedas are considered supplementary to the primary Vedas and are an important part of the Vedic literature There are four main Upavedas: Dhanurveda (deals with art and warfare): It is the Upaveda of Yajur Veda. Gandharva Veda (deals with art and music): It is the Upaveda of Sama Veda. Shilpa Veda (deals with architecture): It is the Upaveda of Atharva Veda. Ayurveda (deals with medicine): It is the Upaveda of Rig Veda.

Dharma sastras are the source of religious law for Hindus. There are eighteen main Smritis or Dharma Sastras. The most important are those of Manu, Yajnavalkya and Parasara. The other fifteen are those of Vishnu, Daksha, Samvarta, Vyasa, Harita, Satatapa, Vasishtha, Yama, Apastamba, Gautama, Devala, Santha Likhita, Usana, Atri and Saunaka.

Manu smriti: It is the earliest Hindu Law book, dated 2nd -3rd century AD, and translated into English by William Jones in 1794. While 58 verses are attributed to Manu, the remaining 2000+

to his disciple Bhrigu it is mainly for Brahmans (1034 verses) and Kshatriyas (971 verses) Important commentaries/ on Manu smriti were by Bharuchi 7th-11th c) and Medhatithi (9th-11th c).

The education system in rig Vedic age was primarily oral, with students learning from their teacher through recitation & memorization. The home of teacher was gurukul or school. The best part of early Veda education system was women held a respected position and enjoyed certain freedom. Some women even composed hymns, & those who choose to engage in Vedic studies were as "Brahmavadini". It also mentions 22 female scholars & sage notable figures like Lopamudra, gosha, apala, and many more. The other best part was that this education system was free of varna system.

The transition from early Vedic period to later Vedic period was gradual & it witnessed the evolution of religious & social practices. This period is also marked as Iron-PGW age because of use of iron in agriculture & painted grey ware.

Gurur Brahma Gurur Vishnuh Gurur Devo Maheshwarah, Gurur Sakshat Param Brahma Tasmai Shree Gurave Namah.
"The Guru is Brahma (the creator), the Guru is Vishnu (the preserver), the Guru is Maheshwara (the destroyer). The Guru is the Supreme Absolute. Salutations to that revered Guru." This shloka highlights the profound reverence for the guru, equating them to the divine trinity in Hinduism, and acknowledging the guru's role in guiding and enlightening the disciple.

India knowledge system is not influenced by Mughal period, in their dynasty we lost most valuable thing from our land which was destroyed in 1193 by Bakhtiyar Khilji, a general of the Turkish ruler Qutbuddin Aibak. Khilji's campaign was part of a broader strategy to expand Islamic influence and suppress other religious and cultural practices. It, was perhaps the single most famous center of higher learning in all of Asia. It attracted students from Java, Tibet, China, and possibly even Mongolia and Korea. This renowned Buddhist mahavihara (great monastery) operated from 427 CE until the 13th century, playing a vital role in promoting the patronage of arts and academics during the "Golden Age of India." Spiritual leaders like Lord Buddha and Lord Mahavira meditated in the region, contributing to its positive energy. Scholars like Nagarjuna, Aryabhata, and Dharmakirti added to the scholarly traditions of ancient Nalanda.

There is a famous line by Thomas Babington Macaulay (1835) "I have traveled across the length and breadth of India and I have not seen one person who is a beggar, who is a thief. Such wealth I have seen in this country, such high moral values, people of such caliber, that I do not think we would ever conquer this country, unless we break the very backbone of this nation, which is her spiritual and cultural heritage, and, therefore, I propose that we replace her old and ancient education system, her culture, for if the Indians think that all that is foreign and English is good and greater than their own, they will lose their self-esteem, their native self-culture and they will become what we want them, a truly dominated nation." Here it was era where our Vedic education system was completely abolished, as they brainwashed our minds making us feel & our education inferior than theirs. It was biggest mistake made by our country and the result we are still facing it.

Now it I talk about newer, moder education system that is more formal, private and state bodies own it focusing on more theoretical knowledge rather than of practical knowledge. Students

are more number oriented rather than of embracing & inculcating the knowledge in their personality. Education is being business more these days, let's not forget about Kota i.e." KOTA FACTORY" known for its coaching centers for competitive exams like NEET and JEE, where many lakhs student come to achieve their goals. due to increasing pressure & standard of this education system Indian students are facing higher suicide rates. Based on the National Crime Records Bureau (NCRB) data, the Student Suicides "The report pointed out that while the overall suicide numbers increased by 2 per cent annually, student suicides cases surged by 4 per cent, despite a likely "under-reporting" of student suicide cases. One of the major factors is increasing depression in this young generation. In a 2021 UNICEF survey, around 14% of 15 to 24-year-olds in India reported frequently feeling depressed or disinterested. The World Health Organization's 2015 report suggested that 4.5% of the Indian population, or approximately 56,675,969 people, were affected by depressive disorders.

Therefore, The Indian National Education Policy (NEP) 2020 signifies a substantial transformation in India's educational framework, incorporating Indian knowledge systems as a key element of the curriculum. This policy highlights the importance of preserving and promoting India's extensive heritage of knowledge systems, which include traditions in philosophy, language, science, and the arts. It acknowledges that the Indian Knowledge System (IKS) can offer valuable insights and perspectives that enrich modern education. The policy aims to inspire the younger generation to appreciate the importance that traditional knowledge once held.

Digital transformation and online classes have revolutionized the Indian education system by enhancing accessibility, flexibility, and cost-effectiveness, while also preserving and promoting traditional knowledge systems. These advancements break geographical barriers, provide interactive learning experiences, and offer equal opportunities to marginalized communities. Additionally, digital tools and platforms help preserve ancient texts, promote traditional practices like Ayurveda and yoga, and facilitate advanced research. By integrating digital literacy and global exposure, the Indian education system is better preparing students for the modern workforce, ensuring a blend of modern and traditional learning. Platforms life you tube, online classes, unacademic and more has contributed all across the country in sharing the knowledge. We must not forget work of Alakh Pandey sir for escalating his knowledge of physics to every JEE & NEET aspirant over all country at minimum and affordable prices & Khan sir famous for teaching upsc aspirants has bought that education at minimum prices. This all has been possible due to digital transformation.

In my perception of judgement; post-independence education era was not at all good knowledge giving era, the system primarily focused more on formalizing the education we evolved technologically but in escalating the knowledge it lagged many places. In our Vedic period teacher were referred as "GURU" most respected entity of societies. But now-days students are lacking basic ethics social responsibilities, honesty with their studies & basic moral values. If we shade light on this growing GenZ generation, these are the most depressed and mentally harassed generation. In my estimation I would more likely to focus growing rage of social media uses among them which is inflicting very negatively their mind. This GenZ era is more focused on short cut success and getting earn & famous in short time eliminating their long-term side effects. Therefore, I will advice to add age regulation in using social media & more focus should be towards gaining knowledge not gathering baggage should be.

Educational institutions play a key role in preserving and sharing the Indian Knowledge System (IKS). By integrating IKS into curricula, they enhance learning, foster cultural appreciation,

and link ancient wisdom with modern knowledge. The Indian government's SWAYAM initiative offers IKS courses with premier institutes to introduce India's rich heritage and sustainable practices. IIT Gandhinagar offers a comprehensive overview of IKS, including topics like Vedanta, Ayurveda, and classical arts. Recognizing IKS's global relevance, institutions should adopt this holistic approach to empower future generations. Successful IKS integration requires a collaborative and adaptive approach to address challenges and meet evolving needs.

Last not least for why I am favor of early Vedic period inculcation to India knowledge system because it has given origin to Sanskrit language. Sanskrit is distinct from other languages due to its grammatical precision, rich vocabulary, phonetic clarity, and algorithmic nature. Codified by the linguist Panini, its rule-based structure is systematic and unambiguous, making it ideal for computational use. The phonetic nature ensures words are pronounced as written, reducing ambiguity. The concept of anuloma-viloma verses, where a shloka reads one way to tell one story and another way to tell a different story, is attributed to the poet Venkatadhvari in his work "Raghava-yadaviyam". We must not forget the legend Aryabhata (476-550 CE) who was a pioneering Indian mathematician and astronomer whose contributions have had a lasting impact on both fields. He gave the world "0" and calculated an approximate value of pi as 3.1416, introduced the concept of the place value system, and made significant advancements in trigonometry. He also proposed that the Earth rotates on its axis and that the moon and planets shine due to reflected sunlight.

Satyam Jnanam Anantam Brahma
"Truth, knowledge, and infinity are the essence of Brahman."

Indian Knowledge Systems: Relevance of Ancient Practices for Contemporary Problems
Bridging Ages: Reimagining Ancient Indian Knowledge Systems for Modern Challenges

Shaik Arshad

Introduction

India's rich and diverse heritage has long been a source of knowledge and wisdom, stretching back thousands of years. From its earliest philosophical doctrines to its advancements in mathematics, astronomy, and medicine, India has contributed significantly to global knowledge. Yet, these ancient practices are often overlooked in the rush towards modernity and technological progress. Today, as we face numerous challenges, including environmental degradation, social inequalities, mental health crises, and a disconnect from nature, the relevance of these age-old systems becomes more apparent.

The ancient Indian knowledge systems, deeply rooted in texts like the Vedas, Upanishads, Puranas, and epics such as the Mahabharata and Ramayana, offer a profound understanding of human existence and the universe. These systems were designed not only to improve the quality of individual life but also to enhance collective well-being through ethics, sustainability, and community-based living. In a world that is increasingly fragmented and driven by individualism, these holistic approaches provide critical insights into achieving balance and harmony—both within oneself and with the world around us.

Indian knowledge is inherently integrative, uniting science, spirituality, philosophy, and ethics in a manner that transcends the boundaries between disciplines. The teachings of ancient texts were not isolated from everyday life; they were meant to guide both personal conduct and societal structures. This holistic approach stands in stark contrast to many modern systems that often compartmentalize knowledge and approach problems in isolation. As we navigate an era marked by rapid technological advancements and societal changes, revisiting and integrating Indian knowledge systems could provide a much-needed foundation for addressing contemporary challenges.

This essay aims to explore how ancient Indian practices in fields such as healthcare, governance, ecology, education, and ethics offer relevant solutions to modern-day problems. By examining these systems through a contemporary lens, we can appreciate their timeless value and potential to shape a more sustainable and harmonious future for both individuals and society at large.

The Indian civilization, one of the oldest in the world, has been a repository of profound knowledge systems that encompass diverse fields such as philosophy, science, medicine, mathematics, agriculture, and governance. Rooted in texts like the Vedas, Upanishads, and Arthashastra, as well as in oral traditions and localized practices, these systems reflect a deep understanding of human nature, ecology, and the universe. While modern society grapples with issues such as environmental degradation, mental health crises, and socio-economic inequalities, revisiting these ancient practices can offer fresh perspectives and sustainable solutions. This essay explores the relevance of Indian knowledge systems in addressing contemporary problems, emphasizing their timeless wisdom and adaptability.

India's ancient civilization has been a beacon of intellectual, cultural, and spiritual achievements. The Indian Knowledge Systems (IKS), encompassing domains such as philosophy, medicine, governance, linguistics, and environmental science, offer holistic frameworks that transcend time. These systems are built upon principles of interconnectedness, sustainability, and the integration of material and spiritual dimensions, making them uniquely relevant to the contemporary challenges of climate change, health crises, social inequalities, and mental well-being.

This essay delves into the enduring relevance of IKS, exploring its applications in modern contexts and highlighting how ancient practices can address pressing global issues. Through examples drawn from environmental conservation, healthcare, governance, and education, this essay argues for the strategic revival and integration of IKS in addressing contemporary problems.

The Foundations of Indian Knowledge Systems

1. **Philosophical Underpinnings**
The foundational texts of Indian knowledge—such as the Vedas, Upanishads, Bhagavad Gita, and Puranas—offer a philosophical framework that is both comprehensive and adaptive. Key principles include:

Dharma: The ethical duty to maintain harmony in individual and collective life.

Satya (Truth): A commitment to truth as the basis of knowledge and action.

Prakriti: The recognition of nature as a living entity requiring respect and balance.

Anekantavada: The Jain concept of multiple perspectives, promoting tolerance and coexistence.

These principles provide solutions to ethical dilemmas, environmental degradation, and social conflicts in the modern world.

2. Interdisciplinary Nature

Indian knowledge systems are inherently interdisciplinary, integrating diverse fields such as mathematics, medicine, astronomy, and linguistics. For instance:

Aryabhata's Astronomy and Mathematics: Provided foundational concepts of zero and planetary motion.

Sushruta Samhita: Pioneered surgical techniques still relevant in modern medicine.

Panini's Ashtadhyayi: A grammatical framework for Sanskrit that influenced computational linguistics.

Such interconnected knowledge systems are invaluable for addressing multifaceted contemporary problems.

Relevance to Contemporary Problems

Environmental Sustainability and Climate Change
Environmental Sustainability: Lessons from Indian Ecology

The Crisis: Environmental Degradation
Climate change, deforestation, and water scarcity are among the most pressing issues of our time. Modern industrial practices often prioritize short-term gains over long-term ecological balance.

Ancient Wisdom: Ecological Harmony
Indian knowledge systems emphasize living in harmony with nature. The Vedic texts extol the interconnectedness of all life forms, while practices like sacred groves and water harvesting showcase ancient India's ecological foresight.

Contemporary Applications
Traditional Water Management: Ancient systems like step wells and johads (water storage structures) can inspire sustainable water management.

Agriculture: Practices such as organic farming, intercropping, and using natural fertilizers were integral to Indian agriculture and can mitigate the harmful effects of chemical farming.

Policy Integration: Governments and NGOs are increasingly incorporating traditional ecological knowledge into policies to combat climate change.

Modern environmental challenges—such as global warming, deforestation, and water crises—can benefit significantly from ancient Indian ecological wisdom.

Lessons from Sacred Texts
Vedic Teachings: The Rigveda speaks of the symbiotic relationship between humans and nature. Hymns to rivers (e.g., Saraswati) and mountains underscore the sanctity of natural resources.

Bhagavad Gita: Advocates moderation in consumption, echoing the principles of sustainable living.

Sacred Groves and Biodiversity: The practice of preserving sacred groves (devaranya) ensured biodiversity conservation and ecological balance in ancient India.

Modern Applications

1. Water Management:
Ancient techniques like baolis (stepwells) and tanka systems for rainwater harvesting are still relevant in water-scarce regions.

Cities like Ahmedabad and Jodhpur are reviving these techniques to combat water scarcity.

2. Sustainable Agriculture:
Practices such as intercropping, crop rotation, and organic fertilization (e.g., using cow dung) align with modern calls for reducing chemical dependency.

The Zero Budget Natural Farming (ZBNF) model, inspired by traditional practices, is gaining momentum as an eco-friendly alternative.

3. Urban Planning:
The Indus Valley Civilization's urban planning, featuring drainage systems and eco-conscious layouts, serves as a model for sustainable city design.

By integrating these ancient methods into modern sustainability efforts, India can contribute significantly to global climate action.

1. Holistic Healthcare: Ayurveda and Mental Well-being
In today's world, diseases such as diabetes, obesity, and mental health disorders are on the rise, often exacerbated by stressful lifestyles and poor dietary habits. Modern healthcare, while technologically advanced, often focuses on symptom management rather than holistic well-being.The modern healthcare system, while advanced, often neglects the holistic dimensions of health. Indian knowledge systems like Ayurveda and yoga offer integrative approaches to physical, mental, and emotional well-being.

Ayurveda: A Preventive Approach
Ayurveda, the ancient Indian system of medicine, emphasizes a preventive and holistic approach to health. It integrates diet, lifestyle, and natural remedies tailored to an individual's constitution (prakriti). Yoga, on the other hand, combines physical postures, breath control, and meditation to promote physical and mental well-being.

Holistic Diagnostics: Ayurveda identifies diseases by examining imbalances in the doshas (vata, pitta, kapha). This personalized approach aligns with the emerging field of precision medicine.Incorporating Ayurvedic dietary principles and yoga into daily routines can reduce the risk of chronic diseases.

Immunity Building: Ancient texts like the Charaka Samhita emphasize immunity-boosting diets and herbs, such as turmeric and tulsi, which are now globally recognized.

Lifestyle Practices: Daily routines (dinacharya) and seasonal regimens (ritucharya) offer guidelines for maintaining balance and health.

Yoga and Mental Health
Mental Health: Mindfulness practices rooted in yoga and meditation have been scientifically proven to alleviate anxiety and depression.

Global Recognition: The International Day of Yoga (June 21), celebrated worldwide, highlights the relevance of these practices in promoting global health

Stress Management: Practices like pranayama (breathing techniques) and asanas (postures) have been scientifically validated for reducing anxiety and depression.

Global Popularity: Yoga's inclusion in therapeutic programs worldwide underscores its universal relevance. For example, the WHO's adoption of yoga-based therapies highlights its efficacy.

Modern Integration
India's National AYUSH Mission promotes the integration of traditional medicine into public healthcare.

Collaborative research between Ayurvedic institutions and modern pharmaceutical companies is advancing evidence-based practices.

2. Governance and Ethical Leadership
The political turbulence and ethical dilemmas of the 21st century demand governance models that prioritize justice, equity, and sustainability. Indian knowledge systems, particularly texts like the Arthashastra and Manusmriti, provide timeless insights.
Lessons from Ancient Governance
Arthashastra: Kautilya's principles of administration emphasize resource management, taxation policies, and welfare. For instance, the emphasis on janapada sukhakritva (ensuring citizen well-being) resonates with modern notions of good governance.

Decentralization: Ancient India's panchayat system (village councils) demonstrates the efficacy of decentralized governance, now a cornerstone of modern democratic systems.

Conflict Resolution: Philosophies like Ahimsa (non-violence) and Shanti Parva in the Mahabharata offer frameworks for resolving disputes ethically.

Modern Implications
Implementing ethical leadership principles from the Mahabharata and Ramayana can address corruption and polarization in politics.

Grassroots movements like the revival of panchayati raj institutions align with the decentralized models of ancient India.

3. Education and Cognitive Development
Modern education systems, often criticized for being exam-centric, can benefit from the holistic and inquiry-driven pedagogies of Indian knowledge systems.

Ancient Pedagogies
Gurukul System: Focused on individualized mentorship, practical learning, and ethical development.

Multidisciplinary Learning: The study of multiple disciplines (e.g., astronomy alongside philosophy) fostered intellectual diversity.

Emphasis on Values: Education integrated spiritual, moral, and intellectual growth, preparing students for life's challenges.

Modern Applications

1. Experiential Learning: Reviving gurukul-inspired models in rural and urban settings to promote hands-on education.

2. Integration with Technology: Digitizing ancient texts and creating interactive platforms for learning Sanskrit, Ayurveda, and other disciplines.

3. Value-Based Education: Incorporating ethical teachings from the Bhagavad Gita and Jataka Tales into school curricula.

Governance and Ethics: Lessons from the Arthashastra and Dharmashastras

The Crisis: Governance and Socio-Economic Inequalities

Modern governance often struggles with corruption, inefficiency, and socio-economic disparities. The focus on economic growth sometimes overlooks ethical considerations and equitable distribution.

Ancient Wisdom: Ethical Governance

The Arthashastra, attributed to Chanakya, provides a comprehensive framework for governance, focusing on ethics, justice, and welfare. It emphasizes the ruler's responsibility to ensure the well-being of all citizens, particularly the marginalized.

Contemporary Applications

Inclusive Policies: Drawing inspiration from the Arthashastra, modern leaders can craft policies prioritizing social welfare and equity.

Corporate Ethics: The principles of dharma (righteousness) and karma (action) can guide corporate governance, fostering accountability and sustainability.

4. A Return to Multidisciplinary Learning

The Crisis: Narrow Specialization

Modern education often emphasizes specialization over holistic learning, leading to a fragmented understanding of the world.

Ancient Wisdom: Gurukula System and Knowledge Integration

The Gurukula system promoted holistic education, blending science, arts, ethics, and spirituality. Texts like the Nalanda and Takshashila curricula highlight the interdisciplinary nature of ancient Indian education.

Contemporary Applications

NEP 2020: India's National Education Policy draws inspiration from ancient systems, advocating for a multidisciplinary approach and value-based education.

Global Interest: Scholars worldwide are exploring Indian epistemology and pedagogical methods to enhance creativity and critical thinking.

Mental and Social Well-Being: Ancient Practices for Modern Life

The Crisis: Rising Individualism and Social Alienation

Rapid urbanization and technological advancements have led to a decline in community bonds and rising levels of loneliness.

Ancient Wisdom: Social Cohesion

Indian traditions emphasize community living and shared responsibilities. Festivals, rituals, and joint family systems foster social harmony and emotional well-being.
Contemporary Applications

Work-Life Balance: Concepts like dharma (duty) and moksha (liberation) can inspire individuals to balance professional and personal lives.

Community Building: Reviving traditional practices of collective celebrations and rituals can strengthen social bonds.

5. Technological Innovations: Learning from Ancient Engineering

The Crisis: Unsustainable Development

While technology has improved lives, it often contributes to environmental and social imbalances.

Ancient Wisdom: Ingenious Engineering

The architectural marvels of ancient India, such as the Iron Pillar of Delhi and the stepwells, demonstrate sustainable engineering and advanced scientific knowledge.

Contemporary Applications

Green Architecture: Learning from ancient designs, modern architects can incorporate passive cooling systems and sustainable materials.

Innovation: Ancient Indian texts on mathematics and astronomy, such as Aryabhata's contributions, continue to inspire scientific research.

Conflict Resolution: Ancient practices of dialogue and consensus-building can address contemporary political and social conflicts.

Challenges in Reviving Indian Knowledge Systems
Despite their immense potential, integrating Indian knowledge systems into modern contexts presents several challenges:

1. Western Dominance: The global dominance of Western paradigms often sidelines indigenous systems.
2. Lack of Documentation: Many ancient texts remain untranslated or are poorly preserved.
3. Skepticism and Misinterpretation: The commercialization of IKS, such as superficial yoga practices, risks diluting their essence.
4. Policy Gaps: Insufficient governmental support for promoting IKS research and education.

Future Directions

Research and Documentation

Initiatives like digitizing ancient manuscripts (e.g., the National Manuscripts Mission) can preserve and disseminate IKS globally.

Interdisciplinary research can validate and contextualize IKS for modern applications.

Policy Integration

Introducing IKS courses in universities and public schools to foster awareness.
Promoting traditional practices in healthcare, agriculture, and urban planning through governmental schemes.
International Collaboration

India can take a leadership role in global platforms by showcasing IKS's relevance, much like the success of International Yoga Day.

Conclusion

Indian knowledge systems are a testament to the ingenuity and wisdom of ancient civilizations. Far from being archaic, they offer timeless principles and practical solutions to contemporary problems ranging from climate change to mental health.

The Indian knowledge systems, enriched by millennia of intellectual and cultural evolution, offer invaluable insights for contemporary challenges. Their holistic and sustainable approaches to health, environment, governance, education, and social well-being remain profoundly relevant in today's fast-paced, fragmented world. By rediscovering and integrating these practices into modern frameworks, humanity can move towards a more balanced, equitable, and harmonious future. As India continues to embrace its rich heritage, it has the potential to guide the world in adopting timeless wisdom for enduring progress.By reimagining and integrating these systems with modern innovation, India can bridge the gap between tradition and modernity, fostering a future rooted in sustainability, harmony, and holistic well-being. The revival of IKS is not just an academic endeavor but a moral imperative to preserve humanity's collective heritage and address global challenges in an interconnected world.

As a student, exploring the Indian knowledge systems has been an eye-opening experience. It amazes me how our ancient practices—crafted centuries ago—address issues that still challenge us today. From Ayurveda's holistic health solutions to the ecological wisdom rooted in our traditions, these systems are more than just relics of the past; they are living frameworks with immense potential for modern applications.

In my opinion, the relevance of these practices is not just theoretical but practical. For instance, incorporating yoga and mindfulness into our education system could help students like me manage stress better. Similarly, understanding sustainable practices from ancient agriculture could guide us in combating environmental crises.

What strikes me most is how these systems emphasize balance—whether it's between health and environment, or ethics and progress. As students, we are often taught to look westward for inspiration, but I believe we must also look inward, rediscovering and valuing the knowledge that originated right here in India. Our generation has the responsibility to bridge the gap between ancient wisdom and modern science, creating solutions that are innovative yet rooted in sustainability and harmony.

Indian knowledge systems are not just lessons from the past but guideposts for the future. As students, embracing and integrating these timeless practices can empower us to create a better, more balanced world.

Kautilya Global Knowledge Education System Towards Ayurveda Sustainable Development NEP-2020 in India

Akanksha Pawar

More than 75 years have passed since India got independence. However, the sustainable development and higher education rates of some castes and tribes in India are disappointing. It is a matter of concern that some backward tribes are today struggling to achieve their sustainable development and increase the rate of higher education.

Introduction

The National Education Policy 2020 was launched on 29 July 2020 to improve the education system in India which had become weak due to customs and traditions and to promote multilingualism and digital education.

The Department of Indian Knowledge Traditions or Indian Knowledge System (IKS) Division of the Ministry of Education (MOE) located at AICTE Headquarters was established in October 2020 by the Government of India to transmit the knowledge of one generation to the next.

Kautilya focused on three outcomes in his education policy, which included Vidya – creation of new knowledge, Viveka – right time for the right purpose, Vichakshana – skill to achieve appropriate results. If the integration of these three is balanced in the education system, then the education system will be properly balanced. The Indian Education Department has integrated these three systems of Kautilya in the Indian Knowledge system.

Indian Knowledge System

Indian civilization has always given great importance to knowledge in the Indian knowledge system. The knowledge of Indian civilization has been preserved in the form of books, collections and manuscripts. The tradition of this knowledge is currently visible in texts, thinkers and schools. Indian knowledge system is related to these three departments: philosophy, knowledge and education. But due to time it is not possible to maintain ancient texts and manuscripts. Therefore, to keep the idea of culture alive in the Indian knowledge system, texts and manuscripts have been renovated through renewal mechanisms.

According to the ancient Indian tradition, 18 Vidya (sciences) and 64 Kala (arts) include knowledge ranging from philosophy to practical, business as well as craftsmanship. Over time, many disciplines of knowledge in various fields, sciences and crafts have been institutionalized. Eg. Ancient Indian Economic thinker Kautilya.

Ancient Indian thinker Kautilya

The name of ancient Indian thinker Kautilya is famous as the author of 'Arthashastra'. This book is written in the style of another man. In this, apart from Kautilya, the name 'Vishnugupta' has also been given. It is generally accepted that Acharya Vishnugupta, the creator of 'Hitopradesh' and Acharya 'Kautilya', the pioneer of 'Arthashastra', were the same. Hitopradesh is also a book written on politics, which has been written in the style of stories of animals and birds for the purpose of children. The principles discussed through these stories are very practical and visionary; hence they are similar to the principles of economics. Kautilya's third name is believed to be Chanakya, which was the name of Chandragupta Maurya's prime minister.

The description of the status and powers of the king under Kautilya's Arthashastra, we can consider it as his principle of sovereignty from the perspective of western thought. Kautilya's explanation of the origin of the king or sovereign is similar to the theory of the social contract prevalent in seventeenth century Europe. Under the theory of social contract, the natural condition has been imagined before the formation of the state. Kautilya has imagined a state of anarchy parallel to this. Kautilya has placed before us the political obligation of the individuals arising out of the establishment of the Sovereign, in the form of the obligation to pay taxes. They have taken the support of religious beliefs to give absolute powers to the sovereign. But at the same time, with the help of these religious beliefs, they have also bound the sovereign with elaborate duties.

Arthashastra book of Kautilya

Arthashastra book are texts referred to the ancient economics of India. This book was written before 300 BC. These texts deal with economics, administration, political thought and many other subjects. Kautilya's Arthashastra (Economics) was written keeping in mind the administrative system.

In Arthashastra, Kautilya shows the knowledge of basic economics. In Kautilya's time the king was at the center of the political body. Kautilya believed that the king was bound by an implicit social contract. Because of which the ultimate aim of the king in economic and other matters should be to benefit his subjects.

In the context of Kautilya's Arthashastra, Jawaharlal Nehru has said, "This Arthashastra deals with many subjects. It covers the duties of the king, his ministers and advisors, the state council, the various departments of the state, the duties of the employment of the villages. Governance of cities, law and judicial courts, social customs-reflecting customs and manners, women's rights, elderly and destitute people, marriage and divorce, military and navy, war and peace, consolidation, farming, eviction, cars, dogs, passports and even the governance is also described in the Arthashastra!"

Kautilyas Economic Evaluation
Establishment of Statehood

The need for the state to be active in helping the poor and helpless and contributing to the welfare of its citizens is why Kautilya emphasized human capital formation. The institution of the state has been created to enable the individual to practice his dharma and thus move towards liberation from the cycle of death and rebirth. A state of arajat (unrighteousness) was viewed with distaste as it was against the practice of dharma. Many ancient Vedic texts refer to Matsya Nyaya (law of fish) which prevails in the state of nature. Such a state is characterized by the absence of dharma and mamtava (private property rights).

Taxation Policy

Kautilya envisioned a 'righteous social contract' between the king and the citizens. Taxes were imposed for the maintenance of social order and a state-run welfare system. In case of aggression by an outside agency, the janapadas (districts) could demand tax exemption as the king had failed in his duty to protect the citizens. The hallmark of his tax system was the 'certainty' of time, rate and mode of payment. The stability of the tax system was an important factor in ensuring active trade and commerce in the Mauryan Empire. This in turn strengthened the state's revenue base and enabled it to maintain a large standing army and welfare apparatus.

Land Tax
Kautilya made certain rules for determining the proportion of tax, in which he made the basis of the type of land, its productivity, the type of produce and the type of irrigation. In this way, he had also proposed tax exemption as an incentive to increase productivity.

New Education Policy 2020
During the stages of education from ancient times to modern education, many radical changes have been made over time, and these changes were made through curriculum changes, active learning, discipline, learning resources, modern technology, etc., because there was a need to improve education in the society. Education systems and schools emerged in different ways according to the culture of each country. In ancient India, schools were run through Gurukul. A Gurukul was a traditional Hindu residential school of education. Gurukul used to mean teacher's house. Today the schools are known by the Sanskrit terms Vidyashram, Vidyalayam, Vidya Mandir, Vidya Bhavan in India.

The government approved the new National Education Policy on July 29, 2020 and it was implemented across the country from the session June 2023-24. A 9-member committee headed by former ISRO chief K Kasthurirangan has drafted the new policy. According to this, school education is structured as 5 + 3 + 3 + 4 instead of 10 + 2. It will consist of 3 years of pre-primary and 2 years of first and second; Next 3 years will be 3rd to 5th; The next 3 years will be from 6th to 8th and the last 4 years from 9th to 12th in a total of 15 years. Children in the early 3 to 6 years age group were not covered by the school curriculum until now; But due to the new education policy they have been included in the school curriculum.

Higher education in universities like Taxshila and Nalanda emphasized oratory, debate, question-and-answer and physician wisdom. Archery, Ayurveda, other practical sciences and arts had a large share of demonstrations. Along with recitation, emphasis was also placed on observation, imitation, guidance and reflection.

After the independence of India in 1948, a committee was formed by the government to create awareness of secondary education among the people. This committee is known as Tarachand Committee. A committee was appointed in 1948 under the chairmanship of Dr Sarvepalli Radhakrishnan. These various committees suggested necessary changes in the structure of the school curriculum.

The central government set up the Mudaliar Commission in 1952 under the chairmanship of Dr. Lakshmanaswami Mudaliar to study and make recommendations on secondary education in the country. The Commission submitted its report in 1953. According to this commission, school education should be 11 years. The last two years of which should be higher-secondary education. Suggested some changes like: Then in 1964 Education Commission was established.

Dr. D. H. Kothari was the chairman of this commission. The Kothari Commission considered all levels and parts of education and suggested some recommendations. Based on the recommendations of this commission, the National Education Policy was approved by the Lok Sabha of India in 1968. The National Education Policy was drafted in 1979. The 6% of GDP aspiration for the Indian education sector has been in the works ever since the Kothari Committee came out with its report Education and Development in 1968 but has more or less remained at 2.8% to 2.9% of the GDP in the last decade despite higher outlays being made every year.

The draft called for inculcating moral and ethical awareness among students so that they can develop good personality and become good citizens.

The Government of India launched the National Education Policy in 1986. Its main objective was to provide education to all sections of the society, with special focus on Scheduled Castes, Scheduled Tribes, Other Backward Classes and women, who were deprived of educational opportunities.

In 1992, the revised National Education Policy was announced. As mentioned in the Revised Education Policy of 1992, the education system was to be reviewed every five years. Accordingly, in November 2000, a revised syllabus was prepared in line with the National Education Policy and this syllabus was announced in September 2001.

The government approved the new National Education Policy on July 29, 2020 and it was implemented across the country from the session June 2023-24. According to this new national education policy, after about 34 years, the national education policy has been changed and special changes have been made in the subjects like language education, business education etc.

The National Education Policy 2020 was launched on 29 July 2020 to improve the education system in India which had become weak due to customs and traditions and to promote multilingualism and digital education.

Early School Education to Modern Education
Various changes took place in stages from early school education to modern education as follows

1) **Syllabus: -** Syllabus has been improved due to competition in various education boards and states.

2) **Shifting focus from content to concept: -** The focus is on understanding concepts rather than just understanding information and memorizing it. It is believed that conceptual understanding will make students better at solving problems.

3) **Engaging students in learning: -** Instead of the teacher talking for hours, by giving topics that students can talk about, students can put their point of view in front of everyone. Hence, more emphasis is placed on learning than teaching.

4) **Active Learning: -** Earlier, students used to learn passively by listening to the teacher and just answering the questions. Nowadays, the student is effectively engaged in active learning. The student asks questions to learn more about what the teacher is teaching. Asking questions to clear doubts leads to deeper study and better conceptual understanding of the subject.

5) **Discipline: -** The methods of school discipline have changed globally. Rather than punishment, the emphasis is now on learning from mistakes and making students realize what went wrong. Learning ensures improving the student-teacher relationship and preparing them for life's challenges.

6) **Games for play: -** The playground now includes games that focus on balance and coordination. In addition, adventure playgrounds are set up to build overall skills rather than initial slips and see-saws.

7) **Technology: -** The location of classrooms has now changed from the traditional four walled room to laptops, tablets and mobile phones. Students don't just learn in a classroom, they can learn remotely from anyone they want. Lessons are taught through various mediums and recorded so that students can repeat or listen to what is taught through those mediums to learn effectively.

8) **Learning Resources: -** Students are taught in a digital classroom using pictures and animations to illustrate concepts. Initially, books, blackboards and notes were the learning tools which have now shifted to exciting new technologies.

9) **Assessment: -** Assessment has evolved from traditional methods of writing answers to questions on test papers to presentations, making videos explaining the topic. Participating in creative activities engages the student in the learning process along with enjoyment.

10) **Learning to read and write: -** Learning to read and write is almost the same. Students are taught letters, words, pronunciation, spelling to be able to read and write. The only difference is how these are taught. A more interactive approach provides better learning.

Ayurveda Sustainable Development Goals

Ayurveda is the major medical system in India. The World Health Organization has called for more evidence and data from traditional medicine practices to inform policymakers, regulatory agencies, health care stakeholders and the public about their safe, effective and equitable use. According to Ayurveda, everything in universe including human beings is composed of the Pancamahabhutasor five basic elements viz. Akasa (Space), Vayu (Air), Teja or Agni (Fire), Jala (Water) and Prithvi (Earth).

Ayurveda aligns well even with the Sustainable Development Goals (SDG) laid down by United Nations, where both Ayurveda and SDGs aims at a more sustainable and equitable changes with respect to social, economic, and environmental challenges. SDG 2 and SDG 12 benefit from Ayurveda's promotion of nutritious, locally available foods and responsible consumption. SDG 3 is directly addressed as Ayurveda emphasizes overall health, well-being, and preventive care.

Sadvritta and Rasayana practices contribute to SDG 3 by supporting physical and mental well-being and longevity. SDG 6 is supported through Ayurvedic practices that maintain hygiene, aligning with clean water and sanitation goals. SDG 13 benefits from Ayurveda's emphasis on locally available, seasonal foods, reducing the carbon footprint and supporting climate action. Sadvritta promotes equality, addressing SDG 10 by emphasizing care and forgiveness for all.

SDG 16 is addressed through daily routines involving meditation and stress management, contributing to individual well-being and indirectly promoting peace and justice. This highlights the potential for Ayurveda to become an integral part of healthcare and sustainability programs, fostering alliances and cooperative efforts to realize the objectives of SDG 17 by exchanging traditional wisdom and practices to advance a comprehensive approach to well-being and sustainable progress. Ayurveda offers a holistic approach to healthcare that can significantly contribute to economic, environmental, and social factors of sustainable growth.

Promotion of Traditional Knowledge enhances the use of indigenous resources and traditional healing methods, which can stimulate local economies and cottage industries along with creating employment opportunities in agriculture processing, and marketing sectors. It can significantly reduce the burden of chronic diseases, ultimately leading to healthcare cost savings for both individuals and governments.

Plant Based Medicine reduces the need for synthetic drugs and their associated environmental impacts. The practices like eating seasonal, locally sourced foods, can reduce the carbon footprint associated with food production and transportation as. Community-Based Healthcare strategies enhances the community participation thereby empowers local communities to take charge of their health, fostering social cohesion and identity.

Conclusion

Change and digitalization in Indian education system is increasing day by day. But over the years India has seen that ancient Indian education has contributed to literature, art and other academic fields, which has lost popularity among the new generation. Hence the Indian Knowledge System (IKS) and the National Education Policy 2020 need to take drastic steps to preserve India's increasingly rare Ayurveda plants and healing systems.

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Indigenous Food Knowledge of Oraon Tribal Community: A Unique Way of Dealing with Malnutrition and Food Insecurity

Seema Kujur

Introduction

"Your diet is your bank account. Good food choices are good investments."- **Bethenny Frankel**

There are over 645 tribal groups, spread across urban and rural areas, each contributing to the country's incredible diversity. With their languages, customs, cuisines, and clothing, these tribes are the colourful threads that embellish India's crown of diversity. Each ethnic group has its own unique indigenous knowledge system which is believed to have been passed down through several generations to make sustainable use of the given environment keeping in mind the future implications. Indigenous food habits are a unique practice and a safeguard to combat malnutrition and food insecurity. For thousands of years, the traditional food systems of Indigenous Peoples have safeguarded both the natural environment and human health. However, food is more than just a source of nourishment for many Indigenous peoples; it is closely linked to social, emotional, and spiritual well-being as well as to land, family, history, and culture (Browne, *et al*., 2020). Chipungahelo, (2015) revealed that Farmers adopted a socialization strategy to disseminate Indigenous knowledge of traditional vegetable cultivation, consumption, and preservation. Oraon community is one of the largest tribal groups in India, possessing a unique tradition and culture (Saha, *et al*., 2015). The Kurukh or Oraon tribes are tribal aborigines who inhabit in numerous states across Bangladesh, Bhutan, and central and eastern India. Tribes of the Chota Nagpur Plateau are known as Oraons (Maitra, 2016). India being a developing country is facing various issues and it needs strategic action to solve the issue.

The Contemporary Problems: Here let's discuss the most prominent problems that India is facing in the current scenario.

1. The problem of Malnutrition and Anaemia in India
Among children: From the NFHS-5 (2019-21) report, it is evident that among children under age five 36% of children are stunted (short for their age); 19% are wasted (thin for their height); 32% are underweight (thin for their age); and 3% are overweight (heavy for their height). Also, the report emphasizes the effect of lack of education among mothers by stating that children born to mothers with no schooling are most likely to be undernourished. 67% of children age 6-59 months have anaemia (haemoglobin levels below 11.0 g/dl), which is higher than the NFHS-4 estimate of 59 percent.

Among adults: 19% of women and 16% of men age 15-49 are thin. Almost the same percentage are overweight or obese (24% of women and 23% of men). The finding of NFHS-5 stated that 57% of women and 25 % of men age 15-49 have anaemia. Women are more prone to get affected by anaemia than men. In rural India, malnutrition remains a significant public health concern despite rapid modernization and the spread of foreign eating patterns. When it comes to combating malnutrition, traditional and indigenous wisdom can be extremely useful.

2. Food Insecurity in India: Agriculture is not only to provide food but it is important for the rural economy. If no agriculture then people can face a food deficit again. Global Hunger Index (GHI) report 2024 placed India has been ranked 105th out of 127 countries placing it in the "serious" category for hunger levels. World Food Day is being observed every year on 16th October, to serve as a global call to action to fight against hunger and malnutrition. The theme of 2024 is **"Right to Food for A Better Life and Better Future"** The theme highlights the importance of access to safe nutritious and affordable food for all. The green revolution has increased the productivity of the food grain and increased food availability. Now the focus should be on nutrition, which is vital for children's development and economic productivity. Therefore, the food-sufficient India needs to be hunger-free too. Conflict at the global level, climate vulnerability, and extremes as well as economic slowdown in regions that remain vulnerable and food deficiency. Food insecurity and malnutrition are a manifestation of a lack of access to and unaffordability to healthy diets. Adequate food does not necessarily imply balanced food intake with all required nutrients to address the concern of malnourishment. An Indian-specific food security measure needs to be urgently developed and implemented so that food insecurity data can more accurately and consistently be collected and contrasted to develop suitable responses to food insecurity. McKay, *et al*., (2023) stated that a food security measure tailored to India must be created and put into place so that data on food insecurity may be gathered more reliably and regularly and compared to create effective solutions. Given the high rate of food insecurity and widespread malnutrition in India, future research should focus on creating such a tool to address public health issues related to nutrition in that country.

Action to Combat Malnutrition and Food Insecurity:
SDG-2 states to End hunger, achieve food security and improved nutrition, and promote sustainable agriculture by 2030. Since 2015, there has been an increase in the number of people experiencing hunger and food insecurity, which has been made worse by the pandemic, violence, climate change, and widening inequalities. The number of hungry individuals increased from 589 million in 2015 to 768 million in 2021. According to projections, 670 million people, or 8% of the world's population, will still be hungry by 2030, the same number as in 2015. Too many children still suffer from malnutrition despite international efforts, and to reach the global goal, the present yearly rate of stunting reduction must rise by 2.2 times. Immediate and increased efforts are needed to guarantee food security, restructure food systems, and invest in sustainable agricultural practices to achieve zero hunger by 2030 (SDG Progress Report, 2023; FAO, 2024).

How the Indigenous food knowledge will help India to combat the ongoing issues?
Conserving indigenous food knowledge about habits can be the greatest alternative for fighting against malnutrition as well as providing nutritious food to the world's growing population. Around 80% of the world's biodiversity is conserved by indigenous people, and their knowledge systems have coevolved with ecosystems to inform agricultural and other subsistence practices. The adaptive nature of indigenous knowledge and practices is frequently overlooked in agricultural development, despite the growing scholarly interest in the co-evolution of ecosystems and knowledge systems. Indigenous food systems knowledge is especially susceptible to ecological and socioeconomic disturbances since it is primarily transmitted orally. The great majority of Indigenous food systems are still not well documented, which makes them even more susceptible to outside disturbances and renders them invisible in discussions concerning the global administration of food systems. Overcoming the marginalization of indigenous knowledge in food systems transitions requires comprehensive

documentation of epistemic resources and their importance for livelihoods and environmental sustainability (Vijayan, *et al*., 2022). According to new scientific research, we can improve food system yields, maximize crop utilization, and maintain nutritional integrity by embracing whole foods with less processing. This would increase food security and lessen our impact on the environment (Iñiguez, 2024).

Indigenous Food Knowledge of Oraon Tribal Community: An Empirical Evidence
A study was undertaken in the states of Jharkhand and Chhattisgarh based on the number of Oraon tribal populations in the Chhota Nagpur plateau purposively. Moreover, the Oraon tribe population in India is 3,696,899 from which Jharkhand and Chhattisgarh constitute the Oraon tribe population of 1,716,618 and 784,739 respectively (Census, 2011). From each selected state, two districts will be selected purposively. From each district, two blocks were selected randomly and from each block, two villages were selected randomly. 25 women were selected randomly from each village. Therefore, the sample of the study was 400. For documenting the Indigenous food and its qualities information was collected using Focus Group Discussion and Key Informant Interviews in each village. There was a total of 16 focused group discussions were carried out to elicit the required information. The validation of information obtained from the Oraon tribal community was then validated using secondary information sources. The following Indigenous food knowledge is being practiced among this tribal community to celebrate their culture, and to solve the ongoing regional-specific issues

1. **Pakhiya (Dana):** In addition to worshipping domestic animals like goats and cattle, the Oroan tribal society also worships nature. Cattle and goats are bathed on the day of Govardhan Puja, and their horns and toes are then oiled. They tie floral garlands as well. They then give them Dana or Pakhiya. This unique dish, which is only produced on the day of Govardhan puja, is composed of parboiled rice, horse gram, asparagus beans, black eyes peas, or Lobia dal, and salt. Whole roasted pulses are boiled until nearly done, followed by a mixture of parboiled rice and boiling until everything is cooked. Since this event falls in the middle of the harvest season for rice and other crops, the people in this town give the grain to the goats and cattle because they think that the livestock will help them grow the crops. This custom is a sign of feeding cattle and other domestic animals, such as cows, bulls, and goats, as cattle bring Dhan, or prosperity, to the home. As part of their celebration, this tribal society also shares Pakhiya among their houses on this day. This food is prepared using different kind of ingredients which makes it more nutritious for people as well.

2. **Beng Sag (*Cantella asiatica*):** In the Kurukh ethnic language, this plant is known by its colloquial name, Mookha Arxa. It is an essential green vegetable that is packed with health advantages. In India, Indian pennywort is a kind of adaptable medicinal herb that has been used for thousands of years. Since the emergence of this delicious green corresponds with the chorus of frogs signalling the advent of rain, the name is taken from baeng, the Bengali word for frog. Because of its rich iron and dietary fibre content, it can be eaten as curry or chutney and offers several health advantages. It can treat varicose veins, heal wounds, lower anxiety, and enhance memory. Scientists from Birsa Agricultural University (BAU), Jharkhand, say that all you need to do to recover from jaundice is a pinch of Beng saag. According to a new study conducted by BAU researchers, it offers several health advantages. Nearly 99 percent of patients reported that drinking the herb's root juice three times a day helped them feel less jaundiced. The root paste can also be used to cure jaundice by applying it to the legs. Beng saag is offered as an appetizer and also serves as a blood purifier.

3. **Kurthi Daal Water:** Horse gram, or Macrotyloma uniflorum, is popular among people who know what it means. It is very easy to digest and has several other health benefits, in addition to being one of the main elements for kidney stone treatment. For people of all ages, it is one of the foods that has virtually no adverse effects. Protein and carbohydrates are added to the kulthi daal, making it a complete food that provides the body with adequate energy. Any of the several recipes can be ingested, depending on the preferences of the individual.

4. **Khapra Saag (*Boerhavia diffusa* L.):** It is a leafy vegetable that is highly valued by the Oraon tribal group. Its many medical uses further encourage its use. It raises the body's level of haemoglobin. It helps mothers who suffer from Sanpaat Disease, Kachcha, or cold after giving birth. The leaves are cooked in mustard oil and spread all over the body to warm the woman. It is sometimes used just to make curry. Jaundice, ascities, flatulence, diabetes, arthritis, constipation, blood impurities, and leucorrhea are among the various conditions it cures (Ghosh, 2017).

5. **Munga Leaves (*Moringa oleifera*) Water:** The whole parts of the plant are used for minimizing blood pressure. Moringa oleifera is a multipurpose herbal plant that is utilized all over the world as a substitute for medicine and as food. Researchers have shown that this plant has several health benefits, including both medical and nutritional ones. Essential amino acids, carotenoids in leaves, and ingredients for nutraceuticals in food preparation are all found in Moringa oleifera. Studies on the nutritional value of leaves and stems have been conducted. a significant element that explains *Moringa oleifera's* therapeutic applications. It contains a vast array of essential components, including vitamins and minerals, antibiotics, and antioxidants. The preservation of moringa seeds for planting is the responsibility of Oraon tribal women.

6. **Rugada (*Astraeus hygrometricus*):** Rugda also known as Puttu by the Oraon's vernacular name is not cultivated at all. Rather, the rare fungus grows by itself beneath the surface, under Sal trees. It gets the perfect humidity for its growth in the dense forests of the state. It looks very different from other mushroom varieties because it does not have any stalk attached to it. It is also extremely healthy to consume because it is richer in protein than regular varieties of mushrooms. Additionally, it has zero carbohydrates and is packed with minerals and vitamins. A nicely cooked bowl of Rugda is the perfect food for mutton lovers who wish to enjoy the taste but are wary of those extra calories. It was observed that it has a sound economic value, but fewer reports and value additions are available. After collection, they are washed and cooked as vegetables. The palatability is very good and it is believed that it has high nutritional components (Inayaka, *et al*., 2017).

Conclusion & Way Forward:

Indigenous food has immense medicinal properties to deal with malnutrition and also incorporating it into food habits may reduce the food insecurity issue in the remote area. Indigenous food knowledge and modern knowledge have to work hand in hand to get insights into how these two bodies of knowledge can make a difference in the current scenario. Because indigenous knowledge in addressing malnutrition in rural India offers sustainable and culturally appropriate solutions. Reviving traditional food practices through education, increasing market access for indigenous crops, and incorporating these foods into government nutrition programs can all help to boost their impact. The policymakers should bring more tribal-based nutrition-led initiatives to synchronize Indigenous food with modern food practices so that the Indigenous foods will get more attention which will work as a nudge technique to make informed food choices among Indian citizens.

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Relevance of Ancient Practices for Addressing Contemporary Challenges

19

Rutuu Doshi

India's ancient knowledge systems are a living testament to the intellectual brilliance of our sages, rishis, and thinkers. These systems with multiple disciplines ranging from metaphysical insights, spiritual teachings, and traditional medicine, to astronomy, mathematics, and governance. These knowledge traditions have been integral in shaping not just the Indian subcontinent but the larger global intellectual and cultural landscape. With the accelerating pace of contemporary problem ranging from environmental degradation and social injustice to mental health crises the wisdom embedded in Indian Knowledge Systems (IKS) offers both practical solutions and profound philosophical perspectives that are increasingly relevant today.

Indian knowledge systems are predicated on the idea of holistic living, where mind, body, and spirit are interconnected. The Vedas, particularly, advocate for a balanced existence, emphasizing the importance of self-awareness, ethical living, and connection with nature. These principles are outlined in depth in the Rigveda and are further elaborated in the teachings of the Upanishads, which offer insights into the nature of the soul (Atma) and its relationship with the universe (Brahma). The concept of Dharma living in accordance with cosmic laws is the main focus of these texts and serves as a guiding principle for life.

The relevance of these Vedic teachings today is immense. As modern life grows increasingly disconnected from nature, the principle of Dharma calls for a return to environmental and social ethics. The crisis of climate change, the depletion of natural resources, and the rampant inequality we face globally can all be seen through the lens of Adharma or the antithesis of living in harmony with universal laws. In this context, Indian knowledge systems urge us to return to sustainable practices, reinforcing the importance of eco-centric living.

A powerful example of how these ancient teachings are relevant today is the practice of organic farming in rural India. Rooted in the concepts of Ahimsa (non-violence) and Prakriti (nature), many farmers are rediscovering traditional methods of cultivation that align with natural cycles, using ancestral knowledge to resist the harmful effects of modern industrial farming. This practice, which has gained international attention, directly addresses contemporary problems of soil degradation, pesticide use, and the depletion of biodiversity. The resurgence of organic farming is a direct application of Vedic principles in solving modern agricultural dilemmas.

A particularly profound aspect of Indian knowledge systems is the emphasis on mental and physical well-being through practices such as Yoga and meditation. The Yog Sutras of Patanjali, one of the most revered texts in the Indian philosophical works, provide a structured approach to mental discipline, meditation, and self-realization. Yoga, at its core, is not merely a form of physical exercise however it should be noted that a path to spiritual enlightenment and self-awareness. Through the eight-fold path outlined by Patanjali, individuals are capable to achieve balance, cultivate inner peace, and transcend the limitations of the material world.

In modern society, which is plagued by stress, anxiety, and a growing mental health crisis, the practices of yoga and meditation offer valuable tools for personal and collective healing. The mindfulness movement, which has gained recognition and attention worldwide, is rooted in these very traditions. Scientific research at this current moment in time, validates what ancient

Indian sages knew intuitively, that regular practice of yoga and meditation leads to reductions in anxiety, depression, and even chronic illnesses (Cramer et al., 2013). For instance, the scientific evidence supporting the benefits of yoga in treating hypertension, diabetes, and heart disease reflects the integration of mind-body principles that were originally developed in ancient Indian texts.

On a deeply personal note, my engagement with yoga and meditation has been nothing short of transformative, reshaping my understanding of the world and my place within it. These ancient practices, stemming from the Indian Knowledge Systems, have provided me with tools to navigate the complexities of life with clarity and balance. My journey began with an exploration of the chakra system, the subtle energy centres that govern physical, emotional, and spiritual well-being. Learning to unlock these centres has been profound, offering not only physical benefits but also insights into the interconnected nature of existence. By aligning these chakras, I have developed a greater sense of self-awareness that permeates both my personal and professional spheres.

Meditation, a cornerstone of ancient Indian wisdom, has been pivotal in this journey. Through consistent practice, I've cultivated mental clarity and emotional intelligence, qualities that are indispensable in today's fast-paced and chaotic world. In moments of stress, meditation serves as a sanctuary, allowing me to pause, reflect, and respond with calmness rather than reaction. This practice has significantly enhanced my resilience, enabling me to face challenges with grace and determination. By centering my mind, I have developed a newfound ability to make thoughtful decisions, even under pressure, which positively impacts my relationships and work ethic.

Yoga has complemented my meditation practice, bringing physical vitality and mental discipline into my life. Beyond the physical postures, yoga embodies the Vedantic philosophy of Aham Brahmasmi that is the realization that the self is a reflection of the universal consciousness. This principle has deepened my sense of connection with others, fostering empathy and compassion. As I delve deeper into the philosophy of yoga, I find myself embracing the idea of Vasudhaiva Kutumbakam which means the world is one family. This realization has transformed how I interact with others, helping me understand and accept people for who they are, regardless of differences.

One of the most fascinating aspects of my journey has been understanding the science behind these practices. The concept of chakras, once dismissed as mystical, is increasingly validated by modern science. Studies show how meditation impacts brain function, reducing stress and enhancing focus. Yoga is also recognized for its ability to lower blood pressure, improve cardiovascular health, and boost well-being. These scientific validations have reinforced my belief in the timeless relevance of these practices, bridging the gap between ancient wisdom and contemporary evidence-based approaches.

Through this journey, I've gained a deeper understanding of interpersonal dynamics. Meditation has allowed me to see beyond superficial differences and recognize the underlying unity of all beings. This perspective, deeply rooted in Vedantic philosophy, has facilitated interpersonal harmony. Whether in personal relationships or professional collaborations, I approach conflicts with a mindset of empathy and resolution. This has been especially valuable in understanding human behaviour, as the insights from meditation and self-reflection help me navigate complex social interactions with patience.

Astrology, another ancient Indian discipline, has also piqued my interest. While often misunderstood, astrology provides a profound framework for understanding the influence of celestial bodies on human life. By studying my birth chart and the positioning of planets in various houses, I've uncovered patterns in my strengths, challenges, and tendencies. This has deepened my self-awareness and helped me understand others better. Astrology, when approached with an open and informed mind, complements meditation and yoga, creating a better path to personal growth.

These combined influences have profoundly shaped my worldview. The chakra system, meditation, yoga, and astrology together serve as a roadmap for navigating life's inner and outer landscapes. They remind me of the importance of balance within myself and in my interactions with the world. They have instilled in me the Vedantic realization that every individual is a smaller version of the universe, interconnected and interdependent. This understanding has transformed the way I approach challenges, relationships, and aspirations.

In a world increasingly characterized by disconnection and materialism, these ancient practices offer a beacon of hope. They guide us toward a life of purpose, balance, and harmony, reminding us of our shared humanity and the profound interconnectedness of all existence. My engagement with yoga, meditation, and astrology has not only enriched my personal and professional life but also deepened my commitment to these timeless traditions. In their wisdom lies the potential to address modern challenges and create a more compassionate, unified world. This journey, rooted in ancient Indian knowledge, continues to unfold, offering lessons and insights that resonate deeply with the universal human experience.

Astrology is often dismissed as mere superstition in the modern age, but it is a profound and intricate aspect of Indian knowledge systems that warrants serious consideration. Rooted in the Jyotish Shastra, or the "science of light," Indian astrology delves far beyond superficial predictions, offering deep insights into an individual's life path and the cosmic forces that shape their existence. This ancient science examines the interplay between celestial bodies and human affairs, proposing that planetary movements and alignments are intrinsically linked to the ebb and flow of life's events.

Unlike Western astrology, which primarily focuses on sun signs and generalized personality traits, Indian astrology provides a far more nuanced and personalized approach. It meticulously analyses the planetary positions in one's kundli (horoscope), revealing insights into life choices, relationships, career paths, and even karmic patterns. The Dasha system, planetary houses (bhavas), and divisional charts are just a few tools that enable astrologers to interpret the potential impacts of celestial forces with remarkable precision.

Astrology's relevance in contemporary life lies in its ability to foster introspection and guide individuals in making informed decisions. By highlighting potential challenges and opportunities, it empowers people to align their actions with the cosmic rhythms, offering a sense of purpose and harmony in an increasingly chaotic world. Far from being mere superstition, astrology embodies a sophisticated system of knowledge that harmonizes the spiritual and scientific, bridging the ancient and the modern in a way that continues to inspire and guide countless individuals today.

Astrology, as I have learned through personal study, is not only with regard to the matter of predicting the future however it should be noted that about understanding the inherent energies within oneself and the universe. The alignment of planets and their impact on the twelve houses in one's chart offers valuable insights into the cycles of life, helping individuals make informed

decisions that align with cosmic rhythms. For instance, the placement of Jupiter in a particular house is capable of indicating areas of life where one is likely to experience growth and abundance, while Saturn's placement on a frequent basis point to the lessons of discipline and hardship. As I have practiced meditation to align my chakras and attune myself to these cosmic forces, I have gained a deeper understanding of myself and the world around me.

Astrology has allowed me to cultivate a sense of awareness and empathy toward others, recognizing in the manner in which their astrological makeup shapes their perceptions and reactions. In this sense, astrology is not just a predictive tool; it is a profound psychological and spiritual framework that enhances personal growth and human connection. As research continues to explore the effects of celestial bodies on human psychology (Chartrand et al., 2018), it becomes clear that astrology, at the time in which approached as a science, offers a rich resource for understanding human behaviour and improving interpersonal dynamics.

Another cornerstone of Indian Knowledge Systems is Ayurveda, the ancient science of life that offers timeless wisdom for health and well-being. Rooted in the Vedas, Ayurveda is built upon the philosophy of maintaining harmony within the body, mind, and spirit. Central to its teachings are the three primary energies, known as Vata, Pitta, and Kapha, which govern an individual's physical, emotional, and mental health. When these energies are in balance, a person experiences vitality, stability, and holistic well-being. Conversely, when they fall out of alignment, disease and illness manifest, highlighting the interconnectedness of bodily systems.

What makes Ayurveda particularly relevant in today's context is its holistic approach to health, which focuses on identifying and addressing the root cause of illness rather than merely suppressing symptoms. This system offers a personalized path to healing, considering an individual's unique constitution, lifestyle, and environment. For instance, in an era dominated by stress-induced disorders and lifestyle diseases, Ayurveda's emphasis on Dinacharya (daily routines), Rasayana (rejuvenation therapies), and mindful eating provides sustainable solutions that align with contemporary needs.

Ayurveda's therapeutic methods, such as herbal remedies, meditation, and detoxification practices like Panchakarma, are increasingly gaining recognition worldwide for their ability to complement modern medicine. This ancient science bridges the gap between preventive and curative care, addressing health challenges at their root while promoting long-term well-being. By reconnecting with Ayurvedic principles, individuals can reclaim balance in their lives and foster a deeper connection between their inner and outer worlds, offering profound insights for a healthier, more harmonious existence.

In the modern context, where the pharmaceutical industry on a frequent basis prioritizes quick-fix solutions over long-term health, Ayurveda offers an alternative rooted in nature's wisdom. Numerous studies have demonstrated the effectiveness of Ayurvedic treatments in managing chronic conditions such as arthritis, diabetes, and stress-related disorders (Pittler et al., 2005). Personally, adopting Ayurvedic principles in my daily routine through the use of herbal remedies, dietary adjustments, and detoxification practices has led to a significant improvement in my overall well-being. The Ayurvedic concept of dinacharya (daily routine) has helped me structure my day in a manner that promotes mental clarity, physical vitality, and emotional balance.

To conclude, the ancient practices embedded in Indian Knowledge Systems are not relics of the past; they are living, breathing philosophies and sciences that have the potential to address

some of the most pressing challenges of our time. From astrology and meditation to Ayurveda and Vedic philosophy, these traditions offer profound insights into human well-being, environmental sustainability, and social harmony. By rediscovering and integrating these practices, we are capable of cultivate a society that values wisdom, empathy, and balance.

The urgency of reconnecting with IKS has never been more evident. As we face climate change, mental health crises, and the erosion of social values, the teachings of our ancestors offer timeless solutions that have been tested by time. Embracing these practices does not mean rejecting modernity however it should be noted that rather blending the ancient with the contemporary to create a more harmonious, compassionate, and enlightened future.

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Indian Knowledge Systems:
Relevance of Ancient Practices for Contemporary Problems

Avani Mahendra Khandpekar

Modern day world is changing rapidly; people have adopted modern ways of living full of comfort, productivity and financial benefits. There is a breakdown of old traditions, norms, and orthodoxy. But we see that in order to remain physically fit, healthy, mentally stable, etc. people have started adopting ancient spiritual, medical and yogic practices. These practices are not only followed in India but also in other countries.

Traditional Folk-arts like Kirtans, Bhajans, Group Dances and Indian Classical Music, helps in reducing mental stress. The Nataraj Statue, the symbolic representation of Lord Shiva dancing forms the base of Bharat Natyam Dancers. It actually represents Yogic Postures. Riddles have also been very popular in the Masses across India and have played a prominent part in the lives of the folks. Even in the oldest known literature the Vedas, the healthy growth of these riddles can be traced. Riddles themselves are very helpful in the study of human culture and anthropology[1].

Rivers have a very special place in the Indian Knowledge system as evident from the ancient scripts. In fact most of the civilizations got established and flourished near these rivers. The following *Shloka* is recited by many Hindus before taking daily bath where one visualizes India as a whole through her rivers like the Ganges, the Yamuna, the Godavari, the Saraswati, The Narmada, the Sindhu and Kaberi (Kaveri) and here there is no scope for any selfishness[2].
Om Gange Ca Yamune Kaiba Godabari Sarasati,
Narmede Sindhu, Kaberi, Jal Hashmin Shani Dhim Kuru

When we think of spirituality, we always synonymize it with divinity and religion. But spirituality is not what we think it is. It is a technique to focus on your inner soul and peep into your inner world. It is a medicine for curing mental depression, anxiety and stress. It is also a process connecting your soul and the divine. Our Saints have been practicing meditation since ages to gain mastery over themselves and lead a long, healthy and fulfilling life. Nowadays people, especially the old people and youngsters to some extent are following a healthy routine full of ancient practices like- doing yoga and meditation by getting up early in the morning, following a veg diet, using organic ways of treating health issues (Ayurveda, herbs, etc.). 'Ayurveda' is the most representative system of traditional medicine in India similar to the traditional Chinese medicine. It is a life-science derived from experience where human health is taken care of by personalized medicine as well as a holistic approach. The basic theory of Indian medicine has 5 elements ('*panchamahabhuta*') that everything in the world is composed of- earth, water, fire, air, ether, etc. these 5 elements supplement the corresponding elements in human body after they are ingested. The gas, bile and mucus- a balance of these three determines the status of health and disease of human body[3].

Yoga word came from the root 'Yuj' that is to join, to unite, to prepare, to fix, to concentrate, union, method to physical mental and spiritual unification, concentration and contemplation, using among other means bodily postures (*asanas*), breath control (*pranayama*) and spiritual techniques[4]. India is famous for 'Yoga' in its original form and in most of the countries one can see prominent centers practicing this technique for physical and mental health. It is rightly said that regular practice of yoga can change thinking at universal level. It is

essentially a spiritual method that helps individuals to unite with self. Yoga teaches us to be mindful about what is happening now without judging anything and observing our experience at every moment. Yoga is the science that helps control the mind[5].

Ancient systems of knowledge like Yoga are crucial to our understanding of holistic health and our life styles. In modern times when stress takes a toll and anxiety drives humanity to the brink, yoga can be panacea. Behavioral and Medical Scientists have demonstrated it convincingly that people have far great capacity to tolerate psychological and somatic stress that was earlier believed. And the reactions in turn thereof can be controlled. Thus yoga is an easy way to attain physical and mental well-being with relatively less effort and some discipline. It is an old answer to new age problems. Let yoga become a lifestyle[6].

We can see that after the COVID 19 pandemic occurred, people started becoming more health conscious and adopted ancient ways of treatment for physical, mental well-being, to become immune to fight against hazardous diseases and viruses, etc. this sudden change in their lifestyle helped them to curb illnesses and stop their occurrence. Also, many people who get the mental illness of depression, anxiety and stress could stay calm and think positive in harsh situations after doing meditation, deep breathing exercises, laughing exercises and yoga. Burning of camphor purifies the air and boosts our immunity hence; people started burning camphor from the time COVID 19 pandemic started to fight against its symptoms.

To maintain the beauty of one's skin, one can make use of organic materials like- neem, turmeric, mint, lemon, rice water, consuming vegetables, etc. there are natural cosmetics too that people use to update their looks. E.g., Vicco company's cream, toothpaste, etc. we can also see people using more earthen pots to store water as it remains cool inside mud and tastes natural, plus its very good for health and they use mud (*Kulhad*) cups, bottles for drinking water and hot beverages. In South India, people drink organic mineral water which has a different taste and is also healthy. Same way, sugarcane juices, lime water, soups made out of vegetable stems are also healthy.

In village areas, there is economic backwardness and hence, people are poor and are dependent on the natural resources available in their surroundings for their survival. E.g., they use cow dung to clean the floors and walls of their house, they also use dried cow dung for cooking, and they use mud-made utensils or utensils made out of steel for cooking, etc. for brushing their teeth, they use the neem stick, *dant manjan*, etc. while travelling, they use palas, badam or banana leaf as plates for having food. They also have a deep understanding of precious herbal trees, plants or flowers that can be used to make organic medicines to cure the patients with toxic illnesses. E.g., papaya leaf's juice to cure dengue, burn neem leaves to drive away the mosquitoes, basil (tulsi) for cold and cough, asafetida for stomach ache, turmeric for stopping the blood clot, *Dagdi Pala(also called Jakham Judi)* for curing injuries, making a kadha of medicinal herbs for curing common cold, weakness and cough, etc.

Tulsi also known as holy basil is perennial plant in India known since ancient Vedic times. It is used in Ayurvedic medicine in India from ancient times to treat adverse health conditions. Its leaves demonstrate multiple medicinal properties. In fact the parts of the plant are used in treatment of Bronchitis, Malaria, Diarrhea, Dysentery, Skin disease, arthritis, eye diseases, and insect bites. Tulsi extract is useful in antifertility, anti-cancer, anti-diabetic, anti-fungal, anti-microbial, cardio-protective, and analgesic, antispasmodic and adaptogenic actions. There is also mention of tulsi- extract to reduce stress, improve sleep quality apart from other health benefits[7]. Tulsi has been mentioned in folklore culture of India[8].

Bamboo is eco-friendly and bio-degradable resource, it has long been used in furniture, clothing and building materials. It has also been used to maintain hair health and control cholesterol levels. Bamboo is important in Feng-Shui and Hinduism as it is thought to bring good luck and positive energy[9]. The North-Eastern States in India have a rich wealth of 'cane and bamboo' which, since ancient times has provided the raw material for making daily use items like- basketry. All over the North East, baskets are usually woven in checker or twill pattern, various shapes and sizes, etc. conical carrying baskets- '*akhi* and *akha*' are common in every household and each house possesses flat-bottomed big baskets for storing grain. The conical hill baskets made of split bamboo are carried by the hill people of Meghalaya, Mizoram and Nagaland.

The Mizo conical basket ('*paikawang*') is popularly used by women for carrying firewood, cotton and to fetch water. A collection of the bamboo crafts include items like- pots and mats, baskets and storage vessels, fishing baskets, musical instruments, bows and arrows, etc. in Manipur, cushionary mats called '*phak*' are made out of dried water reeds with jute twine. In Nagaland, bamboo root is used to create decorative and interesting range of objects. A wind flute is used for creating art and music by the Gadaba and Gond tribes from Chhattisgarh; it is made by engraving tribal designs using a hot iron rod on the tender bamboo[10].

The 'Neem' leaves hold a divine and religious importance for many tribes and for people residing in villages. The village people worship the neem tree as they believe that the goddess of the small pox inhabits it. When a person has small pox, the oil of the neem fruit is used to cure his ailment. It is believed that if the oil is applied to the patient's forehead and lower part of the feet, his temperature reduces. The neem flowers have 'blood purificatory properties', its leaves are used to drive away an evil spirit, etc.[11]

Coconut also has a lot of importance in contemporary times. Its branches are used to make fuel, its coir is used to make manure, mat and is also burned for cooking purposes, etc. its shells are burnt to make nanoparticles and these Nano-composites are cheap and environment friendly, they are also used in many scientific applications like- thermal insulation, reinforcing materials, removing metal contaminants, in green synthesis of silver nanoparticles, for wear resistance applications and for improving mechanical properties of polymer plastics, etc.[12]

Wells and step-wells are also used as important sources of water in villages and they also had a lot of uses in ancient times where people extracted ground water for bathing, drinking water, cleaning their houses, etc. Rajasthan, Gujarat and Maharashtra predominantly have step well culture which is used till date. It speaks of engineering skills prevalent in ancient and modern India. Water scarcity in certain regions is unfortunately due to closure of wells and step wells due to construction or neglect.

I have experienced positivity in teacher-student relationship in present times. Similar to olden times in some institutions that offer courses in social sciences, the teachers are very kind, student-friendly, understanding, helpful and motivational. The idea of the 'Gurukul System' will be much beneficial in modern times where students can learn the importance and purpose of their lives as well as understand how to lead a productive, skill-based and peaceful life from their teachers. In present times, through the 'New Educational Policy' the IKS (Indian Knowledge System) has been introduced which gives importance to ancient educational system and encourages the youth to learn from the past and reform the present in whatsoever ways they can. It also promotes teaching in vernacular languages so; the students who are

fluent in their regional language can understand whatever is being taught to them without any linguistic barriers.

At the time of Tibetan uprising, thousands of Tibetan refugees came over to India. Many of them settled down in Kalimpong, Mussoorie, Dharamshala and a few other places. Some of the Tibetan refugees from Amdo, western part of Tibet decided to devote themselves to the preservation of their ancient cultural tradition. They discovered among themselves, several costume makers, scenic painters, singers and dancers. They formed themselves into a 'Cultural Drama Troupe' on a Cooperative basis with their headquarters at Mussoorie. To buy the materials needed for the costumes and stage props, they raised fund and performed in various parts of the country[13].

In Rajasthan,Ujjain and New Delhi, the Jantar-Mantar is an assembly of stone-built astronomical equipment's. The monument focuses on the rich meteorological knowledge of ancient people when they did not use clocks but sun dials for knowing the time of the day. The sun dial in Jantar-Mantar shows the correct time with an accuracy of about 20 seconds. It also indicates declination of the sun and other heavenly bodies. In fact it is the world's largest stone based sundial also called *'Samrat Yantra'*. There are several instruments like Samrat Yantra like Jai Prakash Yantra, Disha Yantra, Rama Yantra, Chakra Yantra, Rashiwalya Yantra, Dingash Yantra and Utaansh Yantra, primarily used for compiling astronomical tables and to predict the times and movements of sun, moon and other planets.

Some tribes in India produce natural organic food which is free from harmful chemicals, fertilizers, insecticides, artificial flavorings/additives, etc. this is produced mainly for people who are health conscious and who are aware of the malpractices used in producing non-organic food. The organic food is produced using natural inputs and farming practices which make its production faster and healthier. It is less costly. These organic foods that the tribes produce are rich in minerals, essential amino acids and vitamins. The *'Irula'* tribes in Tamil Nadu are specialists in traditional herbal medicine and healing practices. They produce medicines which can be used to treat health issues related to liver, diabetes, ulcers, etc.[14]

In Patna, 'Kiran Devi', a junk seller sells junk (*kabari*) in a shack outside Patna's planetarium. There are old vehicle tyres, empty bottles, stacks of newspapers, once-working gadgets, piles of empty milk packets, etc. these things are discarded by people but are useful for Kiran. There are 10 men who work for her by buying junk from houses and restaurants and are very loyal to her. She comes into contact with many thieves, drug peddlers, addicts but she has learned to identify them and also identify whether the junk they bring is stolen or not. She stacked items and sold them when the market rates increased and she also gave the *Kabariwalas* fifty paise more than others for every one kilogram of junk to make sure they came to give it to her. She is the only woman in her family who can do mathematics and maintain her business well. She also tried to break the traditional stereotypes about women and proved that women can also do the work that men can do. She was assigned the task of creating awareness about education for girls as a part of 'UNICEF's Girl Star Project'[15]. Her example is cited in the chapter Maths Magic for Class four students of CBSE called the 'Junk Seller 'published by NCERT. Our grandmothers used to make quilt out of a worn out cloth, it is also an excellent example of recycling. The concept of junk recycling has immense value in today's world where waste disposal has been a main factor in connection with our environment.

Indian Postal stamps (philately) displays promotion of Indian Knowledge System like historical monuments, fort architecture, step-wells, medieval sculpture, poets, musicians, paintings, Kadamba flowers (The famous Kadamba Dynasty of Goa get its name from here). In the 9th Asian Games hoisted in Delhi (1982), the symbol was based on style of Jantar-Mantar.

In our centuries old Indian philosophy, there is abundant knowledge that is useful in our daily domestic life dealings. This sea of knowledge helps persons to reach towering heights in the attainment of knowledge of a steady wisdom. The cross cultural and cross media influences the revival of traditions, the resilience and continuity of traditions and the creation of new ones is the need of the day. Environment friendly simple lifestyle, limitation of wants, optimum consumption, recycling, healthy organic food, and plant based medicines together with yoga and meditation incorporating ancient knowledge are still so relevant even in today's modern times.

I would like to end my discussion with Saint Dyaneshwar's '*Pasaydan*', which is a prayer for all living beings…

May the darkness of evil in the world vanish and may the universe behold the sun of righteousness. May each and every being gain the fulfillment of desire!

May the concourse of saints who shower all that is auspicious on the earth meet perpetually all beings!

May these saints- groves of wish-yielding trees, abodes of wish-yielding sentient gems, oceans of nectar- who are blemish less moons and who are suns without the oppressive heat be always the kinsmen of all!

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Indian Knowledge System Relevance of Ancient Practices for Contemporary Problems

Sajal Jain

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"India's ancient knowledge is not a thing of the past; it is a light that illuminates the present and a guide that shapes the future." – Anonymous

Introduction

Have you ever played Jenga? If not, here's how it goes: you make a tower of blocks then players take turns, removing one block at a time progressively. This makes the tower unstable. It is a painfully slow process but the outcome is both obvious and Swift the tower crashes and this is what the situation of World Now is.

India, a land steeped in history and culture, has always been a cradle of knowledge and innovation. The Indian Knowledge System (IKS), which encompasses a diverse array of disciplines including philosophy, science, medicine, mathematics, arts, and spirituality, has profoundly influenced human progress. The ancient Indian scriptures such as the Vedas, Upanishads, Arthashastra, and Charaka Samhita offer a treasure trove of wisdom, many aspects of which remain astonishingly relevant to addressing contemporary challenges. As Mahatma Gandhi aptly said, "The past has much to teach us about the solutions we seek today."

In this essay, we explore the Indian Knowledge System's timeless relevance and its potential to solve modern problems in healthcare, sustainability, governance, education, and spirituality. By reviving and adapting these ancient practices, India can not only address pressing global issues but also inspire the world to embrace holistic solutions rooted in harmony and balance.

The Need to Reaffirm Ancient Pride and Knowledge

India's ancient heritage is a reservoir of timeless wisdom, cultural richness, and scientific accomplishments. However, the rapid modernization of society and global influences have often overshadowed this legacy. Reaffirming ancient pride and knowledge is essential not only for preserving cultural identity but also for addressing contemporary challenges. Here's why this endeavor is vital:

1. Revitalizing National Identity

Ancient Indian achievements in science, mathematics, philosophy, and arts form the foundation of the nation's identity. Reaffirming pride in this heritage fosters a sense of unity and belonging among citizens.

As Swami Vivekananda emphasized, "A nation is advanced in proportion to the education and intelligence of its people." Reconnecting with ancient knowledge ensures a deeper understanding of India's intellectual roots.

2. Global Recognition of Contributions

The contributions of ancient India, such as the invention of zero by Aryabhata, Sushruta's surgical techniques, and the principles of yoga, have significantly influenced global progress. Highlighting these achievements on international platforms reinforces India's stature as a pioneer of knowledge.

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Promoting ancient wisdom through initiatives like International Yoga Day showcases India's soft power and cultural diplomacy.

3. Addressing Contemporary Challenges

Ancient Indian knowledge offers solutions to pressing modern issues like climate change, mental health, and sustainable development. For instance, the principles of Ayurveda and yoga provide holistic approaches to healthcare and wellness.

Practices like rainwater harvesting, sustainable agriculture, and organic farming, rooted in ancient traditions, are highly relevant for addressing environmental crises.

4. Encouraging Innovation Inspired by the Past

Ancient texts like Arthashastra and Vrikshayurveda demonstrate India's expertise in governance, economics, and environmental management. Reviving and adapting these ideas can inspire modern innovation in policymaking and technology. Knowledge systems like Sanskrit grammar and ancient mathematical principles can drive advancements in artificial intelligence and computational linguistics.

5. Combating Cultural Erosion

Globalization and the influence of Western cultures often dilute traditional values and practices. Reaffirming ancient pride protects India's cultural essence from erosion.

Emphasizing ancient knowledge in education systems ensures future generations appreciate and preserve their heritage.

6. Promoting Ethical and Inclusive Development

Ancient Indian philosophies, such as Sarva Dharma Sambhava (equal respect for all religions) and Vasudhaiva Kutumbakam (the world is one family), advocate inclusivity and ethical governance. These principles are vital for fostering peace and harmony in a diverse and interconnected world.

7. Empowering Youth with Role Models

Stories of ancient scholars, warriors, and leaders inspire young minds to pursue excellence and contribute to society. Reaffirming pride in these figures nurtures self-confidence and ambition among the youth.

Ancient Indian Wisdom in Medicine and Healthcare

One of the most well-documented facets of IKS is the field of medicine, particularly Ayurveda. Developed over 5,000 years ago, Ayurveda emphasizes the balance between mind, body, and spirit. Modern medical science, with its focus on precision and intervention, often neglects holistic health. Ayurveda's preventive approach, personalized treatment methods, and use of natural remedies provide valuable lessons for combating modern lifestyle diseases such as diabetes, hypertension, and obesity.

Charaka, the father of Indian medicine, said, "Health is the greatest gift, contentment the greatest wealth." Ayurveda promotes lifestyle changes like yoga, meditation, and dietary modifications to maintain health.

Panchakarma, a detoxification therapy in Ayurveda, has been increasingly recognized worldwide for its benefits in improving mental and physical health.

Moreover, India's contribution to surgical sciences, as highlighted by Sushruta Samhita, is unparalleled. Sushruta, often regarded as the father of surgery, described over 300 surgical procedures and 120 surgical instruments. In the age of antibiotic resistance and lifestyle-induced ailments, revisiting such ancient practices could help modern medicine adopt more sustainable and integrated approaches.

Sustainability Lessons from Indian Knowledge
Ancient India's approach to sustainability was rooted in the harmonious coexistence of humans with nature. Texts like the Atharva Veda emphasize environmental conservation: "The Earth is our mother; we are her children."

A. This ecological awareness is deeply ingrained in Indian traditions. Practices such as agroforestry, water conservation, and organic farming are not merely relics of the past but blueprints for sustainable living.
B. The ancient system of rainwater harvesting, seen in structures like stepwells and baolis, was a sustainable way to manage water resources. Reviving these practices can combat water scarcity today.
C. The concept of ahimsa (non-violence) extends to environmental ethics, encouraging minimal exploitation of natural resources.
D. India's traditional agricultural practices, including crop rotation and natural pest control, align with modern organic farming principles. These methods not only ensure food security but also protect soil health and biodiversity.

Mathematics and Science: The Indian Foundation of Modern Knowledge
India has made extraordinary contributions to mathematics and science, with scholars like Aryabhata, Bhaskara, and Brahmagupta laying the groundwork for modern advancements. Aryabhata's discovery of zero revolutionized mathematics and computer science. Similarly, his work on planetary motion predated Copernican theories by centuries.

Quotes such as Aryabhata's assertion, "Earth is spherical and rotates on its axis," reflect the sophistication of ancient Indian astronomy. These insights are relevant even today as the world seeks to advance in space exploration and technology.

The concept of Rasayana in chemistry, as described in ancient texts, finds relevance in modern material sciences and pharmacology. Indian metallurgical practices, such as the creation of the rust-resistant Iron Pillar of Delhi, demonstrate sustainable and innovative use of resources, inspiring researchers even today.

Governance and Economic Systems
Ancient India's governance model, as documented in Kautilya's Arthashastra, offers practical insights into modern administration. Kautilya emphasized the importance of good governance, ethical leadership, and welfare policies. He famously said: "In the happiness of the people lies the happiness of the king."

His principles of taxation, resource allocation, and public welfare are pertinent in addressing issues such as economic inequality and corruption. The democratic practices of ancient Indian republics like Vaishali also serve as a precursor to modern governance, emphasizing public participation and decentralization of power.

Additionally, India's traditional economic systems, rooted in self-sufficient villages and barter trade, demonstrate resilience against global economic uncertainties. The Gandhian concept of Gram Swaraj (village self-rule) echoes these ancient practices, offering a model for inclusive development.

Education and Pedagogy: The Gurukul System
The ancient Gurukul system, where students lived with their teachers and learned through immersive experiences, emphasized holistic education. This approach fostered critical thinking, creativity, and moral values.

Modern education, often criticized for its focus on rote learning, can benefit from incorporating these principles. The National Education Policy (NEP) 2020, with its emphasis on multidisciplinary and value-based learning, reflects the spirit of the Gurukul system. For instance: Learning Sanskrit can unlock ancient texts, enabling students to explore India's scientific and philosophical heritage. Yoga and meditation, integral to ancient education, promote mental health and emotional intelligence in today's stressful academic environments.

Spirituality and Mental Well-Being
The Indian Knowledge System profoundly addresses the realm of mental and spiritual well-being. The Bhagavad Gita and Yoga Sutras provide timeless wisdom on achieving inner peace and resilience. As Swami Vivekananda remarked: "Each soul is potentially divine. The goal is to manifest this divinity within."

The relevance of such teachings is evident in addressing modern challenges like depression, anxiety, and stress. Yoga, recognized globally for its therapeutic benefits, has its roots in Indian spirituality. The International Day of Yoga, celebrated worldwide, underscores the universal appeal of this ancient practice.

India's Ancient Geopolitical Policies: Timeless Strategies for Modern Challenges
India's ancient geopolitical strategies, deeply rooted in philosophy, statecraft, and pragmatism, continue to hold relevance in contemporary international relations. Guided by texts like Arthashastra by Kautilya and principles derived from epics like the Mahabharata and Ramayana, ancient Indian policies emphasized the importance of strategic alliances, ethical leadership, and sustainable diplomacy. These principles, when revisited, offer invaluable insights for addressing modern geopolitical challenges.

Principles of Statecraft in Arthashastra
Kautilya's Arthashastra, composed around the 4th century BCE, serves as a comprehensive treatise on governance and diplomacy. It lays down the foundation for a pragmatic and multi-dimensional approach to geopolitics. The text outlines the Mandala Theory, which categorizes neighboring states as potential allies (mitra), adversaries (ari), or neutrals based on their geographical and strategic positions. This framework advocates dynamic and situational diplomacy rather than rigid alignments.

"Your immediate neighbor is your natural enemy, but the enemy's neighbor can be your friend."

This principle underscores the importance of balancing power through strategic alliances, a concept reflected in modern diplomacy and foreign policy strategies.

Geopolitical Wisdom from the Epics

India's ancient epics also provide rich lessons in geopolitical acumen. In the Mahabharata, Lord Krishna's role as a strategist during the Kurukshetra War exemplifies the value of negotiation, coalition-building, and foresight. His emphasis on maintaining a balance of power resonates with today's efforts to ensure global stability.

Similarly, the Ramayana teaches lessons on coalition-building through the alliances Lord Rama forged with regional powers like the Vanara kingdom. These alliances, based on mutual respect and shared interests, highlight the importance of unity in diversity—a principle crucial in multilateral diplomacy.

Relevance to Modern Geopolitics

1. **Dynamic Alliances**

Ancient Indian strategies advocate flexibility in alliances to adapt to shifting geopolitical landscapes. In today's multipolar world, where power dynamics are fluid, India can leverage such principles to navigate partnerships with nations like the U.S., Russia, and China while strengthening ties with regional blocs like ASEAN and BRICS.

2. **Ethical Diplomacy**

The emphasis on dharma (righteousness) in ancient Indian statecraft underscores the need for ethical conduct in international relations. As global conflicts grow increasingly complex, adhering to principles of fairness and justice can help India establish itself as a trusted leader on the global stage.

3. **Economic and Cultural Connectivity**

Ancient India's policies also prioritized economic diplomacy and cultural exchange, evident in the flourishing trade routes of the Silk Road and maritime trade with Southeast Asia. These practices align with India's contemporary initiatives like Act East Policy and International Solar Alliance, which emphasize regional connectivity and sustainable development.

4. **Strategic Deterrence**

The Arthashastra advocates preparedness and strength as essential tools for peace. This principle aligns with modern doctrines of strategic deterrence, ensuring national security while preventing conflict escalation.

Examples of IKS in Contemporary Problem-Solving

1. **Climate Change Mitigation**

The ancient Indian practice of afforestation, or Vrikshayurveda, provides insights into ecological restoration. Techniques described in these texts can help combat deforestation and desertification.

2. **Pandemic Management**

Ayurveda's emphasis on immunity-building through herbs and lifestyle changes has gained prominence during the COVID-19 pandemic. Practices like Kadha consumption and yoga have been widely adopted.

3. **Digital Innovation Inspired by Zero**

The binary system in computer programming owes its existence to India's discovery of zero, showcasing how ancient ideas continue to drive technological progress.

4. Conflict Resolution through Non-Violence
India's philosophy of non-violence, rooted in ancient Indian thought, has inspired global movements for peace and justice, proving its enduring relevance.

Ancient Wisdom for Modern Times: Reimagining India's Knowledge Systems

1. Ancient Environmental Practices and Climate Change
Relevance of practices like Vrikshayurveda (science of plant life) in modern afforestation and biodiversity conservation efforts. Ancient water management techniques like stepwells, tanks, and rainwater harvesting for tackling modern water crises.

2. Sanskrit as a Language for Artificial Intelligence
The structure of Sanskrit, known for its precision, being studied for advancements in computational linguistics and AI algorithms. Contributions of texts like Panini's Ashtadhyayi in natural language processing.

3. Indigenous Knowledge and Mental Health Solutions
Integration of meditation techniques from Yoga Sutras for reducing mental health issues like anxiety and depression. Relevance of ancient philosophies (Advaita Vedanta, Buddhist mindfulness) in psychotherapy.

4. Sustainable Urban Planning Inspired by Ancient Cities
Studying Indus Valley Civilization's drainage systems and city layouts for eco-friendly urban planning.Incorporating vastu principles in modern architecture for sustainable living.

5. Traditional Knowledge for Pandemic Preparedness
Insights from ancient texts on disease management and immunity-building techniques. Use of Rasayana (rejuvenation therapy) in Ayurveda for preventive healthcare.

6. Cosmology and Astronomy in Ancient India
Contributions of ancient Indian astronomers like Aryabhata and Varahamihira to modern space science. Ancient theories on planetary motion and their relevance to astrophysics.

7. Cultural Diplomacy and Soft Power through Indian Knowledge
Global impact of Indian practices like yoga, meditation, and Ayurveda in diplomacy and cultural exchange. Leveraging these traditions to strengthen India's global influence.

8. Ancient Indian Textiles and Sustainable Fashion
Revival of eco-friendly textiles like khadi and organic dyes to combat environmental pollution caused by fast fashion. Promoting traditional crafts for sustainable livelihoods.

9. Food and Nutrition Science from Ayurveda
Emphasizing Satvik diets and seasonal eating habits for combating modern lifestyle diseases. Traditional cooking methods that align with sustainable food practices.

10. Ancient Indian Sports and Physical Culture
Revival of traditional sports like mallakhamb and kalaripayattu for fitness and cultural preservation. Their relevance in promoting physical and mental agility today.

Challenges in Reviving Ancient Practices

While the Indian Knowledge System offers immense potential, its revival faces challenges such as:

1. Lack of documentation and standardization.
2. Misinterpretation of ancient texts due to language barriers.
3. Resistance from modern institutions that prioritize Western methodologies.

Addressing these issues requires collaborative efforts among scholars, policymakers, and educators. Digitizing ancient manuscripts, promoting interdisciplinary research, and integrating IKS into school curricula are critical steps toward preserving this heritage.

Conclusion

The Indian Knowledge System, with its emphasis on harmony, sustainability, and holistic well-being, is not just a relic of the past but a guiding light for the future. By embracing and adapting its principles, India can lead the world in addressing contemporary challenges while remaining rooted in its cultural identity.

As Rabindranath Tagore said, "A lamp can only light another lamp if it continues to burn in its own flame." Similarly, India must keep the flame of its knowledge alive to illuminate the path for humanity. The revival of the Indian Knowledge System is not merely an act of cultural pride but a necessity for building a more equitable, sustainable, and peaceful world.

Let us take inspiration from our ancestors, who harmonized science with spirituality, progress with tradition, and individuality with collective welfare. It is time to reclaim our intellectual heritage and offer the world a vision of progress that is as inclusive as it is innovative. In doing so, we can ensure that ancient India's timeless wisdom continues to guide us in shaping a better tomorrow.

Relevance of the Indian Knowledge System in Tackling Contemporary Challenges

Mepani Shaini Ramnik

Indian Knowledge System (IKS) has a rich and diverse heritage that spans thousands of years. IKS represents not only what we know from ancient sciences and medicine to philosophy and literature but also a different perspective of understanding life and the universe itself. In the 21st century, as humanity is faced with new complex problems that require fresh solutions, there is growing realization of the need for a complementary integration of this ancient wisdom into contemporary knowledge systems. The essay discusses the importance of IKS today — from sustainable development to related holistic health care approaches, cultural preservation and community well-being by promoting integrated learning in different disciplines;

Sustainability as a thought in itself is inherent of Indian traditions. Old writings like the Vedas, Arthashastra and different epics underline staying commonplace with nature. The Arthashastra by Kautilya is an example of such text that lays out practical approaches to resource use and sustainable farmer behaviour. These ancient techniques can supplement modern day higher production methods. The methods encouraged in ancient Indian texts, such as organic farming, crop rotation, and the use of natural fertilizers are now sustainable agricultural practices known to help fight climate change while securing food.

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Moreover, traditional methods of water conservation like stepwells, tanks as well as check dams also show a sound aquifer knowledge along with sustainable annual groundwater recharge. Accompanied with modern technologies, these methods can solve the problems of today.

Holistic Healthcare
India's traditional medicine, especially Ayurveda and Yoga, provides a broad perspective on health and happiness. The literal translation of Ayurveda is "the science of life," and the approach centres around equilibrium both mentally and physically in the body, as well as aligning the three aspects: body, mind & spirit. This system of medicine promotes preventive care, natural remedies, and the individual treatment plan that parallels modern forms of health and disease care because it captures the essence of personalized medicine and preventive healthcare.

An age-old discipline, yoga integrates physical posture with breathing exercises and meditation is now hailed worldwide for improving mental health as well as physical fitness. Regular yoga practice has been shown to decrease stress, increase cardiovascular health, improve clarity of mind and increase overall well-being. Integrating such practices with modern healthcare can provide additional options for chronic disease treatment and contribute to a long-lasting healthy living.

Cultural Preservation
The Indian Knowledge System represents a profound aspect of the nation's cultural heritage. By integrating IKS into contemporary education and everyday practices, we can safeguard and enhance this heritage. The National Education Policy (NEP) 2020 in India underscores the significance of infusing traditional knowledge and values into educational curricula. This integration cultivates a sense of pride and belonging among students, enabling them to connect

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Addressing Societal Issues

The Indian Knowledge System provides significant insights into tackling various societal challenges. Ancient Indian philosophy underscores values such as Ahimsa (non-violence), Satyagraha (truth), and Sarvodaya (universal upliftment). These principles, advocated by leaders like Mahatma Gandhi, remain highly relevant in contemporary society, where divisions, violence, and inequality persist.

By promoting these values, the Indian Knowledge System can play a vital role in establishing a fairer and more equitable society. Educational initiatives that integrate these principles can nurture empathy, compassion, and a sense of responsibility toward others. Furthermore, traditional conflict resolution approaches, such as the Panchayati Raj (village council system), present community-oriented methods for resolving disputes and fostering peace and harmony.

Promoting Social Harmony and Equity

In a world marked by social fragmentation and inequality, the principles of Ahimsa and Satyagraha offer pathways to reconciliation and justice. By integrating these values into educational curricula and community programs, we can promote non-violent conflict

resolution and social harmony. Moreover, the principle of Sarvodaya, which emphasizes the welfare of all, can guide policies aimed at reducing poverty and inequality.

Traditional systems like Panchayati Raj can be revitalized to enhance local governance and community participation. These systems, based on collective decision-making and mutual cooperation, can empower communities to address their own issues, fostering a sense of ownership and responsibility.

Ecological Knowledge in Traditional Practices
Ancient Indian wisdom contains a profound respect for nature, encapsulated in practices that promote ecological balance. The concept of 'Vasudhaiva Kutumbakam' (the world is one family) emphasizes the interdependence of all life forms, advocating for a harmonious coexistence with nature. Traditional agricultural practices, such as the use of mixed cropping and agroforestry, not only improve biodiversity but also enhance soil fertility and crop yield.

Additionally, the reverence for trees and forests in Indian culture, reflected in festivals like Van Mahotsav and the worship of sacred groves, underscores the importance of conserving natural resources. These age-old practices can complement modern conservation efforts, promoting biodiversity and sustainable development.

Environmental Conservation
Environmental conservation is an area where Indigenous Knowledge Systems (IKS) can offer significant insights. Ancient Indian texts highlight the sanctity of nature and underscore the necessity of living harmoniously within the environment. The notion of Prakriti (nature) as a living entity deserving of respect and preservation is a fundamental aspect of Indian philosophy.

Traditional ecological practices, such as tree planting and forest protection, can enhance contemporary conservation efforts. Sacred groves, known as Devara Kadu, exemplify traditional conservation methods, where specific areas are preserved due to their religious importance. These practices can be effectively integrated into modern conservation strategies to safeguard biodiversity and promote environmental sustainability.

Technological Innovation
Although IKS is frequently linked to traditional wisdom, it also includes considerable scientific and technological progress. Ancient India made significant contributions to mathematics, astronomy, metallurgy, and architecture. Examples of this scientific legacy include the invention of zero, advanced concepts in Sankhya and Calculus, and precise astronomical observations.

Reassessing and integrating these ancient scientific concepts with contemporary technology can pave the way for innovative solutions. For example, ancient architectural methods that prioritize natural ventilation and climate-responsive designs can be utilized in modern sustainable architecture. Likewise, traditional metallurgical techniques can inspire the development of new materials and manufacturing processes.

Interdisciplinary Learning
One of the most significant contributions of IKS is its interdisciplinary approach to knowledge. Ancient Indian scholars did not compartmentalize knowledge; instead, they integrated various disciplines, recognizing the interconnectedness of all fields of study. For example, ancient texts

like the Sushruta Samhita and Charaka Samhita are not just medical treatises but also incorporate elements of philosophy, astrology, and ethics.

This interdisciplinary approach is highly relevant in today's world, where complex global challenges require multifaceted solutions. By integrating IKS into contemporary education, we can promote a more holistic and interconnected understanding of knowledge. This approach encourages critical thinking, creativity, and the ability to see the bigger picture, essential skills for addressing modern-day challenges.

Integrating Traditional and Modern Environmental Practices
Combining traditional ecological knowledge with modern environmental science can enhance conservation efforts. For instance, traditional water harvesting techniques, such as Johads and Baolis, can be integrated with modern water management systems to address water scarcity. Similarly, the practice of agroforestry, which combines agriculture and forestry, can improve biodiversity and soil health while providing economic benefits to farmers.

Educational programs that promote traditional ecological knowledge can raise awareness about the importance of environmental conservation. By understanding the interconnections between traditional practices and modern science, we can develop more effective strategies for sustainable development.

Technological Innovation
While IKS is often associated with traditional wisdom, it also encompasses significant scientific and technological advancements. Ancient India made remarkable contributions to fields such as mathematics, astronomy, metallurgy, and architecture. The invention of the zero, advanced mathematical concepts in Sankhya and Calculus, and sophisticated astronomical observations are just a few examples of India's scientific heritage.
Revisiting and integrating these ancient scientific principles with modern technology can lead to innovative solutions. For instance, ancient architectural techniques, which emphasize natural ventilation and climate-responsive design, can be applied to modern sustainable architecture. Similarly, traditional metallurgical practices can inspire new materials and manufacturing techniques.

The Indian Knowledge System, with its rich heritage and holistic approach, offers valuable insights and solutions for contemporary challenges. From sustainable practices and holistic healthcare to cultural preservation and interdisciplinary learning, IKS provides a comprehensive framework for addressing the complex issues of the 21st century. By integrating this ancient wisdom with modern knowledge systems, we can create a more sustainable, equitable, and harmonious world.

The relevance of IKS in contemporary times underscores the importance of preserving and promoting traditional knowledge. As we move forward, it is crucial to recognize the value of this ancient wisdom and ensure its integration into modern practices and education. In doing so, we not only honor our past but also pave the way for a more enlightened and sustainable future.

Indian Knowledge System: Relevance of Ancient Practices for Contemporary Problems

Hetvi Prakashbhai Chhatrala

The IKS is an amalgamation of various ancient practices and disciplines developed over thousands of years. This, in turn, significantly influences Indian culture, while shaping the larger landscape in a profound way. The disciplines span from Ayurveda, Yoga, and ancient Indian mathematics. Therefore, one needs to understand them by their central ideas, historical backgrounds, and applicability towards modern day issues.

Ayurveda, for example, has been around for centuries, and its understanding of health is holistic. As such, it mainly focuses on balancing the body's energies, Vata, Pitta, and Kapha. Unlike Western medicine, which merely focuses on treating the issues at hand, Ayurveda promotes the concept of prevention based on the individual's constitution. Its historical significance lies in its long-standing presence within Indian culture: it intertwines issues of spirituality and lifestyles. Today, Ayurveda has gained international acclaim for its natural remedies and preventive measures that are in great demand by people looking towards alternative medicine. Yoga is the other important aspect of IKS and is also both a physical practice as well as a spiritual discipline.

The union of body, mind, and spirit through Yoga, rooted in ancient Indian texts like the Vedas and Upanishads, contributes significantly to improved mental health and emotional well-being. Its importance has surged in recent years amid a global mental health crisis arising from modern lifestyles, with many now embracing Yoga not only as physical exercise but also as a means for emotional resilience and stress relief. Similarly, ancient Indian mathematics, which introduced concepts such as zero and the decimal system, has profoundly influenced global mathematics and continues to be integral in fields like computer science and engineering today. The resurgence of interest in these ancient knowledge systems reflects a recognition of their timeless relevance in addressing contemporary challenges, including chronic diseases and environmental sustainability. Ancient wisdom offers holistic solutions that enhance well-being, showcasing sustainable practices that resonate with modern ecological concerns. This historical understanding of ecological balance illustrates how ancient practices can guide contemporary society in achieving healthier, more sustainable lifestyles.

The Arthashastra, a treatise on statecraft and economics, details agricultural practices emphasizing sustainability. Crop rotation, a technique of alternating different crops in a field to replenish soil nutrients, is explicitly mentioned. This helped prevent soil degradation and maintain fertility, preventing the current widespread monoculture farming pitfalls. In mixed cropping, several crops are grown together simultaneously to maintain biodiversity and minimize crop loss through pests or diseases. Natural pest control methods are also cited in the Arthashastra, revealing awareness of ecological relationships and minimal use of harmful chemical pesticides. Ancient India was ingenious in the management of water, which is very evident in its techniques for harvesting rainwater. The stepwells are complex underground storage systems for water, testifying to the understanding of water conservation and its role in agriculture. These structures not only collected rainwater but also maintained the levels of groundwater and thus helped to reduce the effect of droughts.

Further evidence to this is provided by Vedic literature, which is the body of religious and philosophical texts, because it associates water conservation with sacredness and abundance. Such old practices are very valuable in modern water resource management and, in particular, when confronted with climate change and increased scarcity of water. The current revival of traditional methods for water harvesting in different parts of the world has achieved good results in mitigating water stress. The philosophical underpinning of ancient Indian environmental stewardship is in the concept of "Vasudhaiva Kutumbakam," meaning "the world is one family. "This concept is above anthropocentrism, acknowledging the intrinsic value of the natural world and emphasizing interconnectedness. It encourages a sense of shared responsibility towards the environment, not merely as a utilitarian exercise but a moral imperative. This philosophy has recently acquired renewed relevance in shaping discourse over environmental ethics and multinational cooperation over climate change. Collective action, through "Vasudhaiva Kutumbakam," is pre-eminent in confronting transboundary environmental challenges and within this category, climate change and biodiversity loss.

The philosophy at hand emphasizes that economic development and environmental protection should work hand in hand. Ancient Indian practices, particularly in agriculture and water management, offer valuable insights for current sustainability initiatives. By combining traditional wisdom with modern technology, innovative solutions can emerge for today's environmental challenges. The concept of "Vasudhaiva Kutumbakam" highlights our interconnectedness with nature and the urgent need for collective action to protect the planet for future generations. Additionally, there's a growing trend of merging traditional health practices—such as Ayurveda and yoga—with modern medical approaches, focusing on holistic health solutions. This integration not only addresses physical ailments but also prioritizes mental well-being, fostering a more comprehensive healthcare model.

For example, Ayurvedic treatments like herbal remedies and lifestyle changes may complement conventional treatments to give patients a more comprehensive care plan. Some herbs from Ayurveda have been proved to be anti-inflammatory and anti-stress, according to a study. Some of these herbs that are used for healing are turmeric and Ashwagandha. Combining both approaches could treat not only the patient's physical problems but also emotionally and spiritually, hence showing a better health outcome. Apart from Ayurveda, yoga has been said to give mental health benefits through the practice of meditation and pranayama. Since the stresses and anxieties are now on the rise within the modern life, practicing yoga as a routine can work as a form of prevention for mental health disorders. There is evidence that regular practice of yoga lowers cortisol levels, which is a result of stress, and improves mood through the action of endorphins. In addition, controlled breathing techniques, called pranayama, have been tested to reduce anxiety and improve concentration. It helps create a connection between the mind and body, thereby training the human mind to build resistance towards stress. This is one of the best sources through which mental well-being could be maintained. Last but not least, traditional Indian diets offer much knowledge regarding nutrition that can be applied nowadays.

The new guidelines emphasize balance and moderation for suggesting a diet rich in whole foods, seasonal intake of fresh produce, and mindful eating. Revisiting guidelines in the context of recent health challenges such as obesity, diabetes, and hypertension offers an effective way to address prevention and management. For instance, the daily consumption of spices such as cumin and coriander contributes to adding flavor to the food items. The spices are also

beneficial to metabolic health. Moreover, such knowledge about food impacts mental and physical well-being motivates people to have healthy lives. In summary, integration of Ayurvedic principles, use of yoga practices, and applicability of ancient dietary guidelines are promising avenues through which health and wellness can be better improved in the modern world. Combining these traditional approaches with contemporary medical practices leads individuals toward a more holistic approach to health and, therefore, toward improved quality of life and promotion of preventive care culture. Gandhis' economic philosophy is very much founded on the principles of trusteeship, decentralization, and self-reliance and is, therefore, a strong alternative to conventional models of development.

Trusteeship, in its very essence, believes that the rich should hold their possessions in trust for the betterment of society, so that resources are distributed equitably. It challenges the exploitative nature of capitalism and, at the same time, provides a more ethical approach toward wealth management. Decentralization highlights self-governance and self-production, the very core of economic empowerment at the grassroots level. On the other hand, centralization or large-scale industrialization usually leads to environmental degradation and social inequality. Finally, 'swaraj' promotes individual and national self-reliance and thus reduces dependency on the outside forces and facilitates sustainable growth. This recent interest in local sourcing, and the growing popularity of cottage industries, has created a renewed interest in the Gandhian ideals as the world continues to seek new ways of reversing negative impacts of globalization and climate change.

Dharma, which emphasizes righteousness and moral duty, serves as a framework for achieving social justice, as understood through Gandhian principles. Gandhi's interpretation transcends religious boundaries, promoting ethical conduct applicable to all life aspects. In business, Dharma translates into fair labor practices, environmental sustainability, and transparency. It encompasses the need for equality and protection of vulnerable societal groups. The recognition of corporate social responsibility is increasing, and the desire for ethical consumption is increasing as well, which implies that Dharma has been integrated into contemporary economic practices. Businesses have become more concerned with equitable wages and environmental responsibility alongside profitability.

Traditional Indian governance models, specifically village panchayats, are still relevant today in fighting poverty and inequality through participatory decision-making and collective responsibility. Self-governance mechanisms have shown social cohesion and efficient resource management. Though they are marginalized in the contemporary development paradigm, there is a renewed interest in reviving these structures, empowering local communities to lead initiatives customized to their specific circumstances. Successful microfinance projects and community-led initiatives demonstrate that participatory and decentralized models are potent in reducing poverty and equitable resource access. This shows that traditional models can be adapted to handle modern challenges when applied carefully.

The Gurukul system also explains the more holistic approach to education compared to modern compartmentalized learning. All-rounded development of the students was ensured in Gurukuls through experiential learning methods like observation and participation. This experiential education process fostered ethical and moral values and brought up balanced individuals to face life. The bond between teachers and students made personalized guidance feasible, keeping in mind individual learning paces and capabilities. It provided practical experience along with theoretical knowledge and developed a sense of self-reliance and an

attachment to nature. The philosophy of ancient India always considers the establishment of a motivating learning atmosphere, as Shraddha, faith in the learning process, encourages perseverance and dedication towards education. This holistic approach of education and governance, from Gandhian principles to traditional practices, is one that is sustainable towards social justice and equal development.

Satvikta or purity of mind means that the mind is clear and focused. A calm and disciplined mind is less prone to distractions and more receptive to new knowledge. Tapasya, or austerity, is self-control and rigorous effort, which signifies the commitment needed to master any skill or subject. Resilience in overcoming obstacles in the pursuit of knowledge is the hallmark of successful learning in this framework. Though these concepts seem to be very ancient, their relevance is undeniable. Modern research into mindfulness and focus emphasizes the importance of mental clarity, which is echoed in the concept of Satvikta. Similarly, the importance of perseverance and discipline in achieving academic goals is in line with the principle of Tapasya. The concept of Brahmacharya, often misunderstood as mere celibacy, is a much broader principle of disciplined living dedicated to learning.

In the Gurukul context, it meant a commitment to prioritize education and self-improvement over worldly distractions. This commitment fostered sustained focus and dedication to continuous learning, extending far beyond formal schooling. While the literal application of Brahmacharya to every individual today cannot be true, its essence is very much in place: lifelong dedication to learning and self-improvement. It instills a continuous pursuit of knowledge and skills that are required to keep up with the changes and new opportunities that arise in such a dynamic world. Continuous professional development and lifelong learning are watchwords of modern society, demonstrating that this ancient principle remains relevant even today. A very dynamic world today requires an individual who should be constantly engaged in learning to sustain him or herself. Such an attitude toward intellectual and personal growth can be equated to Brahmacharya ideals and thus represents the spirit of Gurukul in the 21st century. In conclusion, the Gurukul system and old Indian concepts teach an essential lesson to modern education regarding the integration of holistic development, the value of a place conducive to learning, and dedication to lifelong learning and self-improvement. Technology and Innovation: Ancient Indian Contributions Ancient India made significant contributions toward mathematics and astronomy, which would later provide the basis for further scientific discovery. A great mathematician and astronomer of the 5th century CE, Aryabhata correctly calculated the circumference of Earth and even developed a heliocentric model of the solar system much before Copernicus did. He did great work in trigonometry and algebra. In the 7th century CE, another prominent figure, Brahmagupta, continued his work. He expanded the works of Aryabhata, making significant contributions to the understanding of quadratic equations and developing sophisticated methods for astronomical calculations. These achievements, though predating modern scientific tools and methodologies, demonstrate a remarkable capacity for intellectual inquiry and mathematical innovation that continues to inspire researchers today. For instance, modern astrophysics still utilizes concepts and algorithms rooted in ancient Indian astronomical observations and calculations. The precision and accuracy displayed in these ancient works highlight the potential of combining traditional knowledge with modern technology to unravel complex scientific phenomena. Apart from the theoretical contributions, ancient India had sophisticated indigenous technologies. For example, iron smelting was at a very advanced stage, which led to very good steel that was used in arms and architecture. The techniques of textile production, such as fine muslin and intricate weaving patterns, were highly advanced and significantly contributed to international

trade. Construction techniques, as evident in magnificent temples and structures built throughout the country, show a deep knowledge of the principles of engineering-the load-bearing capacity and strength.

These technologies, mainly based on sustainable practices using readily available resources locally, offer valuable lessons to be learned in contemporary applications for sustainable development. For example, the efforts currently being made to restore ancient handloom weaving and natural dye making techniques show that old skills can be joined with new market needs. In this way, economic incentives are joined with environmentally friendly activities. Ancient Indian thinking considered instinct and creativity to be part of knowledge discovery and problem solving. Such intuitive knowledge has sometimes been called "prajna" or insightful wisdom, intended to complement reasoning and observation. This holistic approach to knowledge is, of course, opposed to purely empirical, data-driven methods often favored in modern science. However, the development of artificial intelligence, with algorithms based on neural networks simulating intuitive processes in the human brain, shows that there is renewed interest in the incorporation of intuition and creativity into technological development. Along with this emerging interest in design thinking and innovative ways of problem-solving across a wide range of industries, the value of imaginative and intuitive approaches coupled with rigorous analytical methods is increasingly being recognized. Thus, a more balanced and thus more effective approach to innovation can thus be posited-one that balances intuitive insights of the ancient traditions with the precision of modern science.

Ancient Indian mathematicians and scientists provide valuable insights for modern advancements, while their knowledge combined with contemporary methods fosters innovation and sustainable development for the future.

Case study:
1) Sustainable Agriculture: Permaculture and Ancient Indian Farming Practices
   - Challenge: Modern agriculture often depends on chemical fertilizers and pesticides, which can lead to soil degradation, water pollution, and significant environmental harm.
   - Ancient Indian Solution: Permaculture, a contemporary take on traditional Indian farming methods, focuses on developing self-sustaining ecosystems. Crop rotation, mixed cropping, and natural pest control, as discussed in the Arthashastra and other ancient texts, are the very fundamentals of permaculture.
   - Case Study: The Auroville Earth Institute in India has successfully applied permaculture principles, which resulted in improved biodiversity, soil health, and reduced need for external inputs.
2) Water Conservation: Rainwater Harvesting and Ancient Indian Techniques
   - Problem Statement: Global water scarcity is a problem that's increasingly becoming worse, largely due to climate change and increasing demand for water.
   - Ancient Indian Solution: In ancient India, they developed some sophisticated systems of water management, like the rainwater harvesting structures stepwells known as baolis and underground water storage tanks.
   - Case Study: Numerous communities in India have revitalized traditional rainwater harvesting methods, leading to greater water availability for

agriculture, household use, and groundwater replenishment. For instance, the Rajasthan government has launched a successful rainwater harvesting initiative that has benefited millions.

3) Sustainable Living: The Concept of "Appaji" and Minimalism
- Challenge: The prevalence of consumerism and materialism often results in unsustainable lifestyles, environmental harm, and social inequality.
- Ancient Indian Solution: The idea of "Appaji" or contentment and simplicity gives life a sense of meaning and richness with fewer material goods. This idea mirrors minimalism that promotes thoughtful consumption and places emphasis on experiences over things.
- Case Study: The international minimalist movement, partly based on ancient Indian philosophies, urges individuals to declutter their lives, reduce their ecological footprint, and concentrate on experiences and relationships. This movement has gained much momentum, with many books, blogs, and documentaries on the benefits of a minimalist lifestyle.

Ancient Indian practices offer valuable insights that can be adapted to address contemporary challenges and create a more just and sustainable world.

Reference: https://www.researchgate.net/
https://iksindia.org/

Discovering Mahatma in the Legacy of the Indian Knowledge System

Saima Hasan

<u>**Essay:**</u>

"Why should I, who have no need to work for food, spin?" may be the question asked. Because I am eating what does not belong to me. I am living on the spoliation of my countrymen. Trace the source of every coin that finds its way into your pocket, and you will realise the truth of what I write. Everyone must spin." – Mahatma Gandhi

<u>**MANPOWER:**</u>

Today, as a free member of the restricted structure of the world, I want to make you revisit the era of the most historical movement propounded by Gandhi. It was the period when India was a country of rich resources, and East India Company, a Western colonial, took over the hold. The relevant connection that needs to be considered in contemporary times is deliberately giving up freedom to foreign hands. Gandhi's philosophy was said and practiced more than half a century ago and is again re-revealed. The notion of 'spinning' symbolically could be interpreted as engaging in meaningful, sustainable, and community-oriented work. However, while inspiring, with positive use of technologies and strength employed to understand the meaning of freedom. Thus, this philosophy should be combined with the realities of a service-driven and technology-focused economy in favour of societal upliftment. According to his notion of self-creation, it was an intricate step in establishing the framework for an independent nation built on the pillars of self-reliance, dignity, and ethical values. We must be thankful and propitious that India's agricultural heritage is a strong asset that embodies its identity and enormous potential, not a weakness. By valuing and innovating within this heritage, we can unlock advancements in cultural heritage (eg. yoga), medical science (herbal), sustainability, and economic self-sufficiency.

As Gandhi envisioned, true independence extends beyond political freedom to creating a nation that thrives independently on economic, social, and spiritual levels. With this vision, the agrarian foundation of India can be perfectly aligned, serving as an example of resilient and interconnected living. By integrating contemporary science and technology with our rich traditions, we can transform agriculture into a force for advancement that benefits the country and the global community.

It was such a farsighted statement when reading it several times, and it made me feel the true essence concealed in Gandhi's above sayings, *"Trace the source of every coin that finds its way into your pocket,"* he strongly accentuates how individual acts are associated and affect the overall economy unnoticed. By indirectly causing wealth to leave our country, the use of foreign goods erodes the foundation of our economy. Looking at our daily lifestyle, we can observe our foreign intake. Gandhi's wisdom inspires reflection on how our purchasing decisions strengthen or weaken the regional economy. This appeal is financially sound and morally profound, asking people and measuring actions to acknowledge their role in maintaining exploitative and dependent systems. What guides us is that selecting domestic products over imported ones is a sign of economic patriotism since it assures that the currency spent supports India's industries, generates employment, and promotes true independence. It serves as a reminder of the importance of shared prosperity with conscious individual actions.

Moreover, preferring foreign goods over domestic products degrades the Indian currency, impacting the country's overall economic well-being. Each time an imported item is bought, the need for foreign currency increases, causing the Indian Rupee to depreciate in the international market economy. This continuous outflow of wealth exacerbates the trade deficit, where imports exceed exports in value, putting strain on the economy. This dependence undermines local industries, hampering innovation, job creation, and self-reliance while increasing reliance on foreign markets. The weakened currency reflects this imbalance, eroding the nation's economic independence and resilience. Gandhi's insight prompts us to reflect, highlighting that the wealth we allow to leave through foreign purchases undermines the basis of our shared welfare. By consciously supporting indigenous products, we strengthen our currency and affirm the dignity of autarky, ensuring that every coin spent reinforces our people and fortifies India's path to a strong and independent economy.

"I want the cultures of all the lands to be blown about my house as freely as possible. But I refuse to be blown off my feet by any. I refuse to live in other people's houses as an interloper, a beggar or a slave. I refuse to put the unnecessary strain of learning English upon my sisters for the sake of false pride or questionable social advantage. I would have our young men and young women with literary tastes to learn as much of English and other world-languages as they like, and then expect them to give the benefits of their learning to India and to the world, like a Bose, a Roy or the Poet himself." – Mahatma Gandhi

HUMANISM:

The concept of humanism is a brotherhood that loves the natural bond of humans with dignified status among all the creatures and sovereigns of the environmental world. The quoted passage conveys a philosophy of openness to diverse cultures while maintaining a firm grounding in one's identity and values. It emphasizes the importance of learning from others without losing oneself going through the process of Learning and Development. It desires cultural exchange and represents it to let the winds of all lands blow freely through their home. However, they are resolute in not being overwhelmed or displaced by these influences. They reject the idea of abandoning their own culture or becoming subservient to foreign ways. Gandhi considers all reforms to have originated from the initiation of minorities in opposition to majorities through nonviolence, *"Passive resistance is an all-sided sword, it can be used in anyhow; it blesses him who uses it and him against whom it is used." – Mahatma Gandhi.*

It is the philosophy proposed by Gandhi when Indians were harshly treated and terminated from services in their own land, the nonviolent opposition to injustice functions as a mechanism through which individuals maintain their ethical integrity while concurrently appealing to the moral sensibilities of their oppressors. Thereby then, facilitating recognition of their shared humanity. This approach is characterized and demonstrates a profound reverence for life and an unwavering conviction in the universal capacity for moral development. It transcends mere discord, aiming not for conquest but for reformation and reconciliation, ultimately benefiting both the resistor and the oppressor.

The controller responds to inner fortitude, forbearance, and empathy, leaving the oppressor with an opportunity for introspection and atonement. Achieving such a philosophical stance

is predicated on the belief that the fundamental objective of resistance is not to defeat the adversary but instead call for justice and harmony, emphasizing the genuine progress of mutual transformation rather than subjugation.

Moving ahead to another claim, specifically, the obligation to learn English is imposed on women solely for superficial reasons such as pride or social status. Instead, they advocate for learning languages—including English—not for personal vanity but to enrich one's community and contribute meaningfully to India and the world. The examples of figures like Bose, Roy, and Tagore ("The Poet") highlight individuals who used their global knowledge to uplift their homeland and humanity.

In essence, this is a call for balanced cultural exchange: embracing global knowledge while remaining deeply rooted in one's own heritage and using that learning to serve a greater purpose.

"Education simply means a knowledge of letters. It is merely an instrument, and an instrument may be well used or abused." – Mahatma Gandhi

EDUCATION:

Significantly, we have reached a stage where the conscious aptitude of The Indian Knowledge System (IKS) can support a well-rounded approach to education that focuses on values and overall development. Criticising Gandhi on English education being confined to literacy aligns with this philosophy, which requires seeing true learning as a blend of intellectual, practical, and moral growth with national autonomy. This approach exemplifies the Gurukul as a systematic body of primary education, which prioritizes character building and lays a powerful groundwork for an individual's all-encompassing growth.

…as **Professor Huxley** has thus defined education: *"That man I think has had a liberal education who has been so trained in youth that his body is ready servant to his will and does with ease and pleasure all the work that as a mechanism it is capable of; whose intellect is a clear, cold, logic engine with all its parts of equal strength and in smooth working order…whose mind is stored with a knowledge of the fundamental truths of nature…whose passions are trained to come to heel by a vigorous will, the servant of atender conscience… whose has learnt to hate all vileness and to respect others as himself*."
(Gandhi,2009)

Gandhi revised Thomas Huxley's vision to make it understand the meaning of education. The vision of a liberally educated individual emphasizes balanced growth in physical, intellectual, moral, and emotional dimensions. It resonates profoundly with Indigenous knowledge systems and their philosophical approach to education. His ideal connotation of a body as a *"ready servant to the will"* parallels the physical training and equanimity inherent in Indigenous education. Activities like farming, crafting, and hunting nurture harmony with the environment and are adjoined to the education system. Similarly, his depiction of the intellect as a "clear, cold, logic engine" reflects the precision of Indigenous knowledge, which is adaptive and grounded in fundamental truths of nature, such as ecological balance and resource management. This knowledge is imparted experientially, ensuring practical problem-solving abilities that sustain the community. Furthermore, Huxley emphasizes moral training through a *"vigorous will"* and *"tender conscience"* in the order of Indigenous values

that foster potential, respect, responsibility, and commitment. The interconnectedness of life in indigenous traditions reinforces the respect for others as oneself, as seen in communal living and equitable resource sharing. His disdain for *"all vileness"* mirrors the ethical foundation of indigenous systems, which prioritize actions that preserve harmony and reject those that degrade nature. Through storytelling, ceremonies, and rituals, Indigenous education ensures the preservation and respectful transmission of knowledge, instilling moral and communal responsibility. Ultimately, Huxley's liberal education and indigenous philosophies underscore that instrumental education cultivates a balanced, ethically grounded, and community-focused individual in harmony with nature and humanity. By mentioning Huxley, Gandhi attempted to convey the actual impression of education and its composed nature, discarding his criticism of conservatives.

Gandhi experienced British rule and recognized the conditional situation of Indians, which, after practicing as a barrister, made him learn the power policy. Mahatma Gandhi's emphasis on *Home Rule,* or *Swaraj*, is not an antagonistic stance against the English or their institutions but a profound and visionary call for self-reliance and the holistic development of India as a nation. His philosophy transcends the simplistic binaries of opposition or allegiance and extends cognitive solutions rooted in the universal ideals of self-dignity and cultural authenticity. He proposes a balanced interplay of independence and interdependence.

Gandhi recognized the value of English contributions—to education, governance, and the global exchange of ideas. Nevertheless, his advocacy for Home Rule critiqued the over-reliance on foreign systems that eroded India's self-sustaining spirit. He believed no nation could thrive by imitating another or depending excessively on external influences. For Gandhi, true freedom was not merely political autonomy but also the ability to display a course of development based on the ethos of one's civilization. He also believes that we need to make strong recognition of all languages better. The valuable English books ought to be translated into the different Indian languages. We should stop pretending to be skilled in various sciences and adapt to every scheme. Conclusively, use the intellectual cause rather than modernizing in the name of Westernisation. Ethical or religious education will take precedence. Every Hindu know Sanskrit; Mohammedans know Arabic; Parsees know Persian; and all Indians Hindi. Some Mohomedans and Parsees should know Sanskrit, and some Hindi people should know Arabic and Persian. *(Gandhi,2009)*

As Gandhi envisioned it, Home Rule was a call to reclaim the agency of Indian society—not by rejecting English entirely following it despite harmonizing its lessons with indigenous wisdom. However, promoting the resuscitation of village economies, regional crafts, and moral self-governance will create a strong and independent country. His focus on spinning the charkha was not merely symbolic; it reflected his belief that the foundation of greater social change was self-reliance in even the smallest deeds of sensible attitude.

It was simple and comprehensible that it was not an isolationist ideology; Gandhi's idea of Swaraj welcomed international trade but insisted on fairness and respectability. In addition to supporting Indian independence, he criticized colonialism's exploitative systems, which depleted resources within and stunted the growth and the natural development of colonized communities. Eventually, aide-memoire to contemporary India must rediscover and revitalize its legacy and distinctive contribution to the world through innovation rooted in its spirit rather than imitation. Gandhi's demand for home rule is still relevant today by determining the presented visionaries. His Home Rule was an appeal to rediscover and rejuvenate India's unique contribution not through imitation but through innovation rooted in its spirit.

Gandhi's accusation of Home Rule taught us an enduring lesson in autonomy, identity, universalism, and freedom. It was not easy before, but the strength of a nation lies not in rejecting others but in finding itself. Creating a harmonious balance between self-reliance and global interconnectedness brought freedom to India. This philosophy, deeply humanistic and forward-looking, progressive motivation, continues to resonate as a blueprint for development that is both a sustainable society and a soulful motherland.

Knowledge is widely recognized as the key resource for development. The basic component of any country's knowledge system is its Indigenous Knowledge (IK). IK is also called traditional or local knowledge and encompasses people's skills, experiences, and insights applied to maintain or improve their livelihood. *(Rao, 2006)* Indian knowledge system requires a traditional inquiry that respects the country's diverse cultural, historical, and social fabric. Morality and Justice must be stimulated with varied norms, values, and psychological dispositions rooted in India's ancient traditions and philosophies. It must be taken into account as a necessary instrumental tool. In essence, the distribution of primary goods and liberties should consider cultural contexts and societal structures to ensure that the unique necessities of a well-being society are adequately addressed. India's historical experiences, such as colonial exploitation and post-independence development challenges, highlight significant disparities between nations and races. In harsh environments, preparation by people often struggle to grow sufficient food, earn a living, access education, receive medical care, or connect with commerce and power. These challenges make it difficult for them to sway the policies, laws, and institutions that could upgrade their circumstances and shape their futures. Their existential survival often depends on knowledge gained through inspection, experiences, and an intimate understanding of the environment within the context of their specific culture. *(Puri,2007)*

As a result, the practicality and local relevance of principles and policy decisions must be assessed. devising and directing the systemic techniques of trade, resource distribution, and development disparities is necessary to extend the values of justice globally, especially incorporating India's attempts to forge fair international relations. Besides, the coexistence of social welfare and economic advancement is prioritized in the Indian ethos.

Curricula should emphasize the contextual distribution of resources and opportunities, encouraging students to critically examine how different cultural and social contexts influence the idea of students should be encouraged to envisage sequelae that address the needs of marginalized communities while advancing economic and technological progress, ensuring education nurtures both ethical awareness and creative problem-solving skills.

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Indian knowledge systems:
Relevance of Ancient Practices for Contemporary Problems

Gaytari kumara

"India lives in several centuries at the same time"

India, a land of diverse cultures, languages, and traditions, has been home to a rich tapestry of knowledge systems since ancient times. India got a super rich history of knowledge systems, rooted in the Vedas, Upanishads, and other traditional texts, have been passed down through generations, offering insights into various aspects of human life. From environmental sustainability to mental well-being, ancient Indian knowledge systems provide valuable solutions for contemporary problems. This essay explores the relevance of ancient Indian practices for modern challenges, highlighting their potential to foster a more holistic and sustainable future.

The Vedas, ancient Indian texts, emphasize the importance of living in harmony with nature. The concept of "Priority" (nature) is deeply ingrained in Indian philosophy, recognizing the interconnectedness of all living beings. This worldview encourages sustainable practices, such as conservation of natural resources, eco-friendly waste management, and preservation of biodiversity. Ancient Indians practiced sustainable agriculture, using techniques like crop rotation and organic farming. These practices can inform modern sustainable agriculture initiatives, reducing the environmental impact of farming practices.

Ayurveda, India's traditional medicine system, offers a holistic approach to healthcare. This ancient practice recognizes the interconnectedness of physical, mental, and spiritual health, using natural remedies and lifestyle recommendations to promote well-being.

Ayurveda's emphasis on preventive healthcare, personalized medicine, and integrative therapies can inform modern healthcare practices. Ancient Indian physicians like Charaka and Sushruta developed advanced medical practices, including surgery and pharmacology. These contributions can inspire modern medical research and practice.

Yoga and meditation, ancient Indian practices, offer valuable tools for modern mental health challenges. These practices promote mental clarity, calmness, and focus, reducing stress and anxiety. Yoga and meditation can also enhance cognitive function, boost mood, and improve overall well-being. Ancient Indian texts like the Upanishads and Bhagavad Gita emphasize the importance of mental discipline and self-awareness. These teachings can inform modern mindfulness and meditation practices.

Ancient Indian mathematics and astronomy also made significant contributions to modern science and technology. The concept of zero, developed in ancient India, revolutionized mathematics and facilitated scientific advancements. Ancient Indian mathematicians like Aryabhata, Brahmagupta, and Bhaskara made significant contributions to fields like algebra, geometry, and trigonometry. These contributions can inspire modern scientific research and innovation.

The Vedas and Upanishads also emphasize the importance of education and personal growth. Ancient Indian education systems like Gurukuls and Vedic schools encouraged experiential learning, critical thinking, and character development. These practices can inform modern education initiatives, fostering a more holistic and inclusive approach to learning.

Agriculture and Sustainable farming

Ancient Indian agriculture practices were deeply rooted in the country's rich cultural and spiritual heritage. These practices were not only sustainable but also environmentally friendly, socially equitable, and economically viable. Here are some ancient Indian agriculture practices that can help address modern challenges:

1. Crop Rotation and Inter cropping: Ancient Indians practiced crop rotation and intercropping to maintain soil fertility, reduce pests and diseases, and promote biodiversity. This practice can help reduce the use of chemical fertilizers and pesticides, promoting sustainable agriculture.

2. Organic Farming: Ancient Indians used natural and organic methods to control pests and diseases, such as using neem leaves, cow dung, and urine. This practice can help reduce the use of chemical pesticides and promote organic farming.

3. Rainwater Harvesting: Ancient Indians practiced rainwater harvesting to conserve water and reduce dependence on groundwater. This practice can help address modern challenges like water scarcity and climate change.

4. Agroforestry: Ancient Indians practiced agroforestry, integrating trees into agricultural landscapes to promote biodiversity, reduce soil erosion, and increase crop yields. This practice can help address modern challenges like deforestation, soil degradation, and climate change.

5. Polycultures: Ancient Indians practiced polycultures, growing multiple crops together to promote biodiversity, reduce pests and diseases, and increase crop yields. This practice can help address modern challenges like monoculture farming, soil degradation, and climate change.

6. Cow-Based Agriculture: Ancient Indians practiced cow-based agriculture, using cow dung and urine as natural fertilizers and pest control methods. This practice can help reduce the use of chemical fertilizers and pesticides, promoting sustainable agriculture.

7. Seasonal and Local Food Systems: Ancient Indians practiced seasonal and local food systems, consuming food that was locally grown and in season. This practice can help reduce the carbon footprint of food transportation, promote local economies, and preserve traditional food cultures.

8. Community-Based Agriculture: Ancient Indians practiced community-based agriculture, working together to manage land, share resources, and promote social equity. This practice can help address modern challenges like rural poverty, inequality, and social isolation.

9. Spiritual and Cultural Significance of Agriculture: Ancient Indians viewed agriculture as a sacred and spiritual practice, recognizing the interconnectedness of human and natural systems. This practice can help promote a deeper appreciation for the cultural and spiritual significance of agriculture, encouraging more sustainable and equitable farming practices.

10. Traditional Crop and Animal Varieties: Ancient Indians developed and conserved traditional crop and animal varieties, promoting biodiversity and reducing dependence on external inputs. This practice can help address modern challenges like crop monocultures, genetic erosion, and climate change.

By adopting these ancient Indian agriculture practices, modern farmers and policymakers can promote sustainable agriculture, reduce environmental degradation, and improve rural livelihoods.

Resource management

Resource management in ancient India was guided by the principles of sustainability, equity, and social responsibility. Here are some ancient Indian practices that can inform modern resource management:

1. Water Management: Ancient Indians developed sophisticated water management systems, including reservoirs, canals, and irrigation channels. These systems ensured equitable distribution of water, minimizing waste and promoting efficient use.

2. Waste Management: Ancient Indians practiced waste management through segregation, composting, and recycling. They recognized the importance of minimizing waste and promoting sustainable consumption patterns.

3. Energy Management: Ancient Indians used renewable energy sources like solar, wind, and hydro power. They also developed energy-efficient technologies, such as the "chulha" (a clay oven) for cooking.

4. Land Management: Ancient Indians practiced sustainable land management through crop rotation, intercropping, and agroforestry. These practices promoted soil fertility, reduced erosion, and maintained biodiversity.

5. Forest Management: Ancient Indians recognized the importance of forests for ecosystem services, biodiversity, and human well-being. They practiced sustainable forest management through selective harvesting, reforestation, and conservation.

6. Mineral Resource Management: Ancient Indians extracted minerals like iron, copper, and gold using sustainable methods. They also developed technologies to recycle and reuse metals, minimizing waste and promoting efficient use.

7. Community-Based Resource Management: Ancient Indians managed resources through community-based systems, where local communities were responsible for managing and conserving natural resources. This approach promoted social equity, accountability, and sustainability.

8. Spiritual and Cultural Significance of Resource Management: Ancient Indians viewed resource management as a sacred and spiritual practice, recognizing the interconnectedness of human and natural systems. This approach promoted a deeper appreciation for the cultural and spiritual significance of resource management.

9. Traditional Knowledge and Practices: Ancient Indians developed traditional knowledge and practices for resource management, such as using natural indicators for weather forecasting and developing crop varieties resilient to climate change.

10. Institutional Frameworks: Ancient Indians developed institutional frameworks for resource management, including laws, regulations, and community-based organizations. These frameworks promoted accountability, transparency, and social equity in resource management.

By adopting these ancient Indian practices, modern policymakers and resource managers can promote sustainable resource management, reduce environmental degradation, and improve human well-being.

Urban Planning

Ancient India had a rich tradition of urban planning and sustainable architecture, with many cities and buildings designed to be environmentally friendly, socially equitable, and economically viable. Here are some examples of ancient Indian urban planning and sustainable architecture that can inform modern challenges:

1. Grid-Based City Planning: Ancient Indian cities like Mohenjo-Daro and Harappa were planned on a grid system, with wide roads, public spaces, and a sophisticated drainage system.
2. Mixed-Use Development: Ancient Indian cities had mixed-use development, with residential, commercial, and recreational spaces integrated into a single neighbourhood.
3. Green Spaces: Ancient Indian cities had ample green spaces, including parks, gardens, and forests, which helped to mitigate the urban heat island effect and improve air quality.
4. Water Management: Ancient Indian cities had sophisticated water management systems, including canals, reservoirs, and drainage systems, which helped to conserve water and prevent flooding.

Sustainable Architecture

1. Use of Local and Sustainable Materials: Ancient Indian buildings were constructed using local and sustainable materials, such as stone, brick, and wood, which reduced the carbon footprint of construction.
2. Passive Design: Ancient Indian buildings were designed to maximize natural ventilation, lighting, and cooling, reducing the need for mechanical systems.
3. Energy Efficiency: Ancient Indian buildings used energy-efficient design elements, such as thick walls, small windows, and shaded courtyards, to reduce heat gain and energy consumption.
4. Water Harvesting: Ancient Indian buildings incorporated water harvesting systems, such as rooftop collection and storage tanks, to conserve water and reduce storm water runoff.

Modern Applications

1. Sustainable Urban Planning: Ancient Indian urban planning principles, such as mixed- use development and green spaces, can inform modern sustainable urban planning initiatives.
2. Green Building Design: Ancient Indian architectural principles, such as passive design and energy efficiency, can inform modern green building design initiatives.
3. Water Conservation: Ancient Indian water management systems, such as water harvesting and conservation, can inform modern water conservation initiatives.
4. Climate Resilience: Ancient Indian urban planning and architectural principles, such as flood-resistant construction and climate-responsive design, can inform modern climate resilience initiatives.

By studying ancient Indian urban planning and sustainable architecture, modern policymakers and practitioners can gain valuable insights into designing and building sustainable, resilient, and lovable cities.

Ethical and spiritual traditions

Ancient Indian practices offer valuable lessons for contemporary sustainable development, addressing modern challenges such as climate change, environmental degradation, and social inequality. Here are some lessons from ancient Indian practices:

1. Holistic Approach: Ancient Indians adopted a holistic approach to sustainable development, recognizing the interconnectedness of human and natural systems. This approach can inform modern sustainable development initiatives, promoting integration and balance between economic, social, and environmental objectives.

2. Living in Harmony with Nature: Ancient Indians lived in harmony with nature, recognizing the importance of preserving natural resources for future generations. This principle can inform modern sustainable development initiatives, promoting environmental conservation and sustainable resource management.

3. Community-Based Development: Ancient Indians practiced community-based development, recognizing the importance of community participation and ownership in sustainable development initiatives. This approach can inform modern sustainable development initiatives, promoting community-led development and social equity.

4. Circular Economy: Ancient Indians practiced a circular economy, recognizing the importance of reducing waste, reusing resources, and recycling materials. This principle can inform modern sustainable development initiatives, promoting waste reduction, recycling, and sustainable consumption patterns.

5. Social and Environmental Responsibility: Ancient Indians recognized the importance of social and environmental responsibility, promoting practices that minimized harm to people and the environment. This principle can inform modern sustainable development initiatives, promoting corporate social responsibility and environmental stewardship.

6. Local and Indigenous Knowledge: Ancient Indians recognized the importance of local and indigenous knowledge in sustainable development, promoting practices that were adapted to local contexts and ecosystems. This principle can inform modern sustainable development initiatives, promoting the use of local and indigenous knowledge in development planning and decision-making.

7. Long-Term Thinking: Ancient Indians adopted a long-term perspective in sustainable development, recognizing the importance of planning for future generations. This principle can inform modern sustainable development initiatives, promoting long-term thinking and planning in development decision-making.

8. Simple Living and Minimalism: Ancient Indians practiced simple living and minimalism, recognizing the importance of reducing consumption and waste. This principle can inform modern sustainable development initiatives, promoting sustainable consumption patterns and reducing waste.

9. Education and Awareness: Ancient Indians recognized the importance of education and awareness in promoting sustainable development, promoting practices that educated people about the importance of sustainability and environmental conservation. This principle can inform modern sustainable development initiatives, promoting education and awareness about sustainability and environmental conservation.

10. Spiritual and Cultural Significance: Ancient Indians recognized the spiritual and cultural significance of sustainable development, promoting practices that respected the sacredness of nature and the interconnectedness of human and natural systems. This principle can inform modern sustainable development initiatives, promoting a deeper appreciation for the spiritual and cultural significance of sustainability and environmental conservation.

Here are some potential future research directions for ancient Indian practices in addressing modern challenges:

Environmental Sustainability

1. Integration of ancient Indian agricultural practices with modern sustainable agriculture: Investigating the potential of integrating ancient Indian agricultural practices, such as crop rotation and organic farming, with modern sustainable agriculture techniques. Ancient Indian water management systems: Studying ancient Indian water management systems, such as stepwells and canals, to inform modern water conservation and management practices.

2. Biomimicry and ancient Indian architecture: Exploring the potential of biomimicry in ancient Indian architecture to inform modern sustainable building design and construction practices.

Health and Well-being

1. Investigating the efficacy of ancient Indian medicine: Conducting research on the efficacy of ancient Indian medicine, such as Ayurveda, in addressing modern health challenges.
2. Yoga and meditation for mental health: Investigating the potential of yoga and meditation in addressing modern mental health challenges, such as anxiety and depression.
3. Ancient Indian dietary practices for modern health challenges: Studying ancient Indian dietary practices, such as the use of turmeric and other spices, to inform modern health and nutrition practices.

Education and Community Development

1. Ancient Indian education systems for modern education reform: Investigating the potential of ancient Indian education systems, such as the Gurukul system, to inform modern education reform initiatives.
2. Community-based development initiatives inspired by ancient Indian practices: Developing community-based development initiatives inspired by ancient Indian practices, such as the concept of "gram swaraj" (village self-rule).
3. Ancient Indian practices for promoting social cohesion and community engagement: Investigating the potential of ancient Indian practices, such as the concept of "sarva bhuteshu yenaikam" (seeing the divine in all beings), to promote social cohesion and community engagement.

Economic Development and Innovation

1. Ancient Indian economic systems for modern economic development: Investigating the potential of ancient Indian economic systems, such as the concept of "artha" (wealth), to inform modern economic development initiatives.
2. Innovation and entrepreneurship inspired by ancient Indian practices: Developing innovation and entrepreneurship initiatives inspired by ancient Indian practices, such as the concept of "jugaad" (frugal innovation).

3. Ancient Indian practices for promoting sustainable consumption and production: Investigating the potential of ancient Indian practices, such as the concept of "aparigraha" (non-possessiveness), to promote sustainable consumption and production patterns.

These research directions offer a starting point for exploring the relevance and potential of ancient Indian practices in addressing modern challenges. By adopting these lessons from ancient Indian practices, modern policymakers and practitioners can promote sustainable development that is holistic, equitable, and economically sustainable.

In conclusion, ancient Indian knowledge systems, practices, and traditions offer valuable insights and solutions for addressing modern challenges. From sustainable agriculture and environmental conservation to social justice and economic development, ancient Indian practices provide a holistic and integrated approach to problem-solving.

By embracing these ancient wisdom traditions, we can foster a more sustainable, equitable, and harmonious world. Ancient Indian practices such as ahimsa (non-violence), dharma (duty), and karma (action) can inform modern initiatives for promoting social responsibility, environmental stewardship, and sustainable development.

Furthermore, ancient Indian knowledge systems such as Ayurveda, yoga, and meditation offer valuable tools for promoting physical, mental, and spiritual well-being. These practices can inform modern initiatives for promoting health and wellness, reducing stress and anxiety, and improving overall quality of life.

In addition, ancient Indian practices such as sustainable agriculture, water management, and energy efficiency can inform modern initiatives for promoting environmental sustainability and reducing our carbon footprint.

As we move forward in addressing modern challenges, it is essential that we draw upon the wisdom of ancient Indian knowledge systems and practices. By integrating these ancient wisdom traditions into modern initiatives, we can create a more sustainable, equitable, and harmonious world for all.

Ultimately, the relevance of ancient Indian knowledge systems and practices for modern challenges lies in their ability to provide a holistic and integrated approach to problem- solving. By embracing these ancient wisdom traditions, we can foster a deeper understanding of the interconnectedness of human and natural systems, and promote a more sustainable and equitable future for all.

Reviving Ancient Wisdom: The Timeless Relevance of Indian Knowledge Systems in Addressing Modern Challenges

Tania Singla

In the labyrinth of modern challenges – environmental degradation, public health crisis, socio – economic inequalities and cultural erosion – the wisdom of ancient Indian Knowledge systems holds timeless solutions. Rooted in centuries-old traditions, these systems encompass various fields, including medicine, agriculture, architecture, philosophy, and environmental stewardship. Reviving and integrating this ancient wisdom with contemporary practices can address modern problems more sustainably and effectively. Let's explore how ancient practices can offer us a way forward.

- *AYURVEDA AND MODERN HEALTH CARE:* - Ayurveda, an ancient system of medicine originating over 3,000 years ago, provides a holistic approach to health that remains highly relevant today. Unlike conventional medicine, which often targets symptoms, Ayurveda seeks to address the root causes of illness through natural means. Its emphasis on preventive care, natural remedies, and personalized treatments is increasingly relevant in today's healthcare landscape. In today's rapidly advancing world, **veterinary science** faces numerous challenges, from managing diseases to ensuring sustainable animal husbandry practices. Interestingly, many ancient practices, passed down through generations, provide invaluable insights and solutions to these modern issues. By integrating these time-tested methods with contemporary techniques, veterinary science can address today's problems more effectively. One area where ancient practices are particularly relevant is in the use of herbal medicine. Ancient civilizations, such as those in **India and China**, have long used natural remedies to treat animal ailments. For instance, **Turmeric (Curcuma longa)**, a staple in Ayurvedic medicine known for its anti-inflammatory and antioxidant properties, is now supported by numerous scientific studies. Today, this herb continues to be a valuable resource in managing conditions like *arthritis in pets and livestock.* The use of herbal medicine is not only cost-effective but also reduces the reliance on synthetic drugs, which can have side effects. Modern medicine acknowledges its effectiveness in managing chronic conditions like digestive disorders. In veterinary medicine, **acupuncture** is used to manage chronic pain, improve mobility, and treat gastrointestinal issues in animals. This practice involves inserting thin needles into specific points on the body to alleviate pain and treat various conditions.

https://www.vethelplineindia.co.in/veterinary-medicine-and-animal-keeping-in-ancient-india/

Ashwagandha (Withania somnifera), traditionally used to boost energy and reduce stress, with studies published in **Journal of Ethnopharmacology** supporting its adaptogenic properties. **"Health is wealth,"** a common saying, encapsulates the essence of Ayurveda's approach—preventive care, natural treatments, and the balance of mind, body, and spirit**. Imagine** a futuristic healthcare center that combines cutting-edge technology with Ayurvedic wisdom. Patients would receive personalized treatment plans that include digital health monitoring along with traditional herbal remedies. The center's design incorporates elements of Vastu Shastra to create a healing environment, blending modern comfort with ancient tranquility.
https://www.sciencedirect.com/journal/journal-of-ethnopharmacology

- ***VASTU SHASTRA: HARMONIOUS LIVING SPACES: -*** *Vastu Shastra*, the ancient Indian science of architecture, emphasizes creating harmonious living spaces in tune with nature. Its principles advocate for optimal use of natural light, ventilation, and spatial orientation to promote well-being. In today's rapidly urbanizing world, Vastu Shastra inspires eco-friendly architectural designs that minimize energy consumption and environmental impact. Traditional Indian homes often featured courtyards that allowed natural light and ventilation, reducing the need for artificial lighting and air conditioning. Studies published in **Journal of Environmental Psychology** show that homes designed with natural light and ventilation improve occupants' mental health and productivity. The principles of Vastu Shastra, therefore, offer valuable guidelines for sustainable and healthy architectural design. **"A home should be a reflection of the harmony within,"** highlights the importance of designing living spaces that foster physical and mental well-being. **Imagine** a modern city designed with Vastu Shastra principles. Buildings are oriented to capture maximum natural light and ventilation, reducing the need for artificial energy.
  Rooftop gardens and green spaces create urban oases, combining ancient wisdom with modern sustainability.
  https://www.ijfmr.com/papers/2024/1/13155.pdf

- ***SUSTAINABLE AGRICULTURAL PRACTICES: LESSONS FROM THE PAST:***
  Agriculture, the **backbone of India's economy**, can draw extensively from traditional practices for sustainability and resilience. Ancient farmers developed techniques such as crop rotation and intercropping to maintain soil fertility, manage pests, and maximize land use. Modern research supports the benefits of these traditional practices. For instance, a study published in **Agricultural Systems** highlights that **crop rotation** improves soil health and increases crop yields, while **intercropping** maximizes land use and promotes ecological balance. The resurgence of **organic farming** methods, documented in various case studies, demonstrates reduced environmental impact and improved long-term sustainability. These methods reduce dependency on chemical fertilizers, enhance biodiversity, and improve crop yields. Traditional water management practices like rainwater harvesting and step wells are particularly relevant today, given global water scarcity. These age-old techniques capture and store rainwater efficiently, providing a sustainable and reliable water supply for agriculture. **"The farmer is the soul of the nation,"** resonates with the notion that sustainable agricultural practices are vital for the nation's prosperity.
  Imagine an intelligent farming system that integrates AI with traditional knowledge. Sensors monitor soil health and weather patterns, while farmers use ancient crop rotation techniques to enhance productivity. Drones equipped with water-spraying technology mimic ancient rainwater harvesting practices, ensuring efficient water usage.
  https://www.researchgate.net/publication/380029805_Crop_rotation_and_intercropping_techniques

- ***YOGA: A HOLISTIC APPROACH TO MENTAL HEALTH***: - *Yoga,* with its roots in ancient Indian philosophy, has gained global recognition for its mental and physical health benefits. In a world increasingly plagued by stress and mental health issues, yoga offers effective tools for relaxation, mindfulness, and emotional balance.

Scientific research supports the positive effects of yoga on mental health, including reduced symptoms of depression and anxiety, enhanced mood, and improved cognitive function. Incorporating yoga into daily routines can help individuals manage stress, develop resilience, and improve overall quality of life. For example, a study published in **Frontiers in Psychiatry** found that regular yoga practice significantly reduces symptoms of depression and anxiety. **"Yoga is the journey of** the self, through the self, to the self." — The Bhagavad Gita. Imagine virtual reality (VR) yoga sessions that transport practitioners to serene landscapes inspired by ancient Indian environments. Users can practice yoga on the banks of the Ganges or amid the tranquility of the Himalayas, enhancing their mental and physical well-being.

https://www.frontiersin.org/journals/psychiatry/articles/10.3389/fpsyt.2023.1138205/full

- ***ETHICAL AND PHILOSOPHICAL INSIGHTS: -*** Ancient Indian texts, such as the Bhagavad Gita and Upanishads, offer profound ethical and philosophical insights that remain relevant today. These teachings promote resilience, ethical conduct, and the pursuit of knowledge. The concept of "dharma" in the *Bhagavad Gita* underscores the importance of duty, righteousness, and ethical conduct. In times of moral and existential crises, these timeless principles guide individuals to live lives of integrity and purpose. The philosophy of "ahimsa" (non-violence), championed by *Mahatma Gandhi* and rooted in ancient Indian thought, continues to inspire contemporary movements for social justice, peace, and environmental conservation. **"The best way to find yourself is to lose yourself in the service of others."** — **Mahatma Gandhi Imagine** AI-driven ethical training programs based on ancient Indian philosophies. These programs use interactive storytelling to teach values like dharma and ahimsa, guiding people towards ethical decision-making in their personal and professional lives.

- ***INDIGENOUS KNOWLEDGE AND BIODIVERSITY CONSERVATION: -*** India's indigenous communities have long practiced sustainable living, drawing on their deep ecological knowledge and close relationship with nature. These communities possess insights into biodiversity conservation, forest management, and sustainable resource use, which are crucial for addressing contemporary environmental challenges. Research published in **Biodiversity and Conservation** underscores the importance of indigenous knowledge in preserving biodiversity. Traditional practices such as **agroforestry**, where trees and crops are grown together, help conserve biodiversity, improve soil health, and provide multiple sources of income and food. Indigenous knowledge of medicinal plants contributes to the conservation of biodiversity and the development of sustainable healthcare practices. **"Nature provides a free lunch, but only if we control our appetites."** — **William Ruckelshaus. Imagine** a digital platform that documents and shares indigenous knowledge about biodiversity. This platform, accessible globally, could help scientists, farmers, and conservationists integrate traditional wisdom with modern techniques to preserve biodiversity and promote sustainable development.

CONCLUSION: -
Incorporating ancient Indian practices into contemporary problem-solving offers a wealth of sustainable and effective solutions. From healthcare and agriculture to architecture and mental health, the relevance of these practices is clear. Embracing

this ancient wisdom not only preserves cultural heritage but also paves the way for a future that is harmonious, sustainable, and enlightened. As we navigate modern challenges, it is essential to draw upon the rich legacy of Indian knowledge systems to create a better and more balanced world.

- By blending journalistic clarity with academic depth, this essay seeks to illuminate the profound relevance of ancient practices in solving contemporary problems. This fusion of styles reflects the enduring wisdom of India's past and its potential to address the pressing issues of today and tomorrow.

Personalised medicine through Ayurvedic approach: How the ancient medical system is contemporary answer

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Devika M

The idea of patient-centered treatment, or personalized medicine, challenges the one-size-fits-all approach to medicine. "Personalised medicine refers to a medical model using characterisation of individuals' phenotypes and genotypes (e.g. molecular profiling, medical imaging, lifestyle data) for tailoring the right therapeutic strategy for the right person at the right time, and/or to determine the predisposition to disease and/or to deliver timely and targeted prevention." Precise crafting of intervention based on genetics of the patient and pathology of the disease, reduces the chances of adverse drug interactions in body. Eventhough it still have not taken the pivotal role in healthcare, we can agree that the implementation of personalised medicine has great potential to reduce expenses in terms of finances and time, and increase quality of life and longevity of patients. It is hailed as an innovation in the healthcare system; right now, the focus is mainly on the preventative measures and promoting pro-active actions for health.

India's traditional medical system, known as Ayurveda, has flourished since ancient times. It provides a holistic approach to wellbeing by addressing all facets of health. Known for its preventative and individualized approach to therapy, Ayurveda offers customized nutrition plans (ahara), lifestyle modifications (vihara), and specialized treatments (aushadhi), known as the three pillars for each patient. Ayurveda provides a distinctive and traditional method called Prakriti, which categorizes the entire population to deliver individualized medical care. Prakriti, which is defined by the doshas (pitta, kapha, and vata) and their dominance in the body, is the fundamental constitution of the human and affects every facet of the person. According to the tridoshas' permutations, it is divided into seven categories. Accordingly, Ayurveda views every person as unique, including their health and disease as an interplay of many intrinsic and environmental influences and prakriti is the basis for treatment. Before recommending a course of treatment, Ayurvedic doctors assess each patient's prakriti. Applying the prakriti principle is a relatively simple and affordable technique to concede personalization in illness prevention and wellbeing promotion. While single nucleotide polymorphism (SNP) and epigenetics influencing drug response drive personalisation in modern medicine, phenotypic, physiological, and social and behavioural aspects can help us place individuals into different prakritis which simplifies the process of personalisation in Ayurveda. The interindividual difference are simplified by making cohort to predict the pattern of drug response in them, this is also applicable to disease susceptibility and quality of life. Thus, making it easier to give personalised suggestions for prevention.

Determining prakriti help us to inculcate its application daily. Prakriti largely determines inter individual variability in susceptibility to diseases and response to external environment, diet, and drug. They can help us cater diet and lifestyle recommendations which help to maintain balanced state of health. Identification of any predisposition to disease and their prevention can be done based on prakriti. Personalized treatment to suit the individual can also be crafted. This helps to address underlying factors of lifestyle that require change rather than contemporary medicine, where curative regime can be adopted only after an individual suffers or shows signs

of an impending illness and there are no methods to identify healthy individuals who would be differently susceptible to disease.

According to the principles of Ayurveda, the Pancha mahabhuta or five basic elements i.e., akasha (space), vayu (air), agni (fire), Jala (water) and Prithvi (earth) make all physical entities. They manifest in our body as tridoshas, governing the integrity of human body. Vata dosha consists of vayu and akasha mahabhuta. Thus, deriving its qualities from the mahabhutas. The functions of initiation and movement in body are regulated by vata dosha. Transportation of fluids, breathing in air, communication through nerve impulses, excretion are all governed by vata. The pitta dosha originates from agni and jala. Metabolism is the main function attributed to pitta dosha. Cellular respiration, digestion, thermoregulation etc are done by pitta dosha. Kapha dosha is formed by Jala and prithvi mahabhuta. Structure and storage represents functions of kapha. Lubrication of joints, moisturisation of skin, regulation of immunity are carried out by kapha.

Vata dosha dominant individuals are characterised by physical traits like lean body, dry skin, and quick movements. They are characterised with hoarse voice irregular appetite and bowel movements, light sleeping habits and quick exhaustion. Dominant pitta dosha manifested as medium body frame, oily skin, warm body, good complexion, and sharp features. Also, strong appetite, digestion, thirst, and higher levels of sweating are present. They have moderate strength, pimples and freckles on face, early greying of hair. They tend to be prone to anger issues, strong ambition, and assertiveness. Kapha prakriti dominant individuals have strong and stable body, smooth and oily skin, and slow and steady movements. They have regular patterns of appetite and digestion, also experience sound sleep, endurance, and patient behaviour. Each of the dwidoshaj prakriti (vata-pitta, vata- kapha, pitta-kapha) are combination of traits from both the doshas. In sama dosha, there is an equal balance of tridoshas, showing optimal health.

Ayurvedic texts reveal that individuals with Vata Prakriti are prone to ailments associated with movement restrictions, cognitive decline, and dryness, including neurological disorders, dementia, arthritis, and constipation. Pitta Prakriti individuals, on the other hand, are more susceptible to inflammatory conditions, skin rashes, hypertension, ulcers, and bleeding disorders. Kapha Prakriti individuals often experience heaviness and congestion-related issues, such as obesity, diabetes, and respiratory illnesses. These predispositions are rooted in the fundamental qualities of each dosha. Vata, characterized by dryness, lightness, and movement, can manifest in conditions like arthritis when its balance is disrupted. Pitta, associated with heat, sharpness, and transformation, can lead to inflammatory disorders when excessive. Kapha, linked to heaviness, coolness, and stability, can contribute to sluggishness and congestion, potentially resulting in conditions like obesity and diabetes. Understanding these predispositions allows individuals to proactively manage their health through lifestyle modifications and Ayurvedic practices tailored to their specific Prakriti. By maintaining balance within their doshas, individuals can reduce their susceptibility to these common ailments and promote overall well-being.

Thus, beforehand knowledge of prakriti to proactively modify lifestyle and dietary regimen to bring personalised preventive measures can be crucial. Vata individuals, characterized by their light, dry, and erratic nature, often benefit from a consistent sleep schedule, calming practices like meditation and yoga, and a diet rich in warm, oily foods. This helps to ground and stabilize their doshas. Pitta dosha dominant individuals, known for their intense and fiery nature, may find relief from stress and inflammation through moderate exercise, cooling activities like

swimming, and a diet that emphasizes sweet, bitter, and astringent flavours. These practices help to balance their pitta and promote a sense of calm. Kapha dominant individuals, often grounded and stable, may benefit from a lighter sleep schedule, stimulating activities like vigorous exercise, and a diet that includes light, dry, and spicy foods. These approaches help to counteract their tendency towards heaviness and sluggishness. Further research in this field will qualitatively refine personalized recommendations. By combining the wisdom of Ayurveda with modern scientific insights, we can develop more precise and effective approaches to health and wellness.

There are several studies to substantiate the correlation of prakriti to principles in modern medicine which further solidifies the application of ayurvedic principles for personalizing treatments. Recent research has revealed a fascinating link between the ancient Ayurvedic concept of Prakriti and modern medical understanding. This connection strengthens Ayurveda's potential to tailor treatments and preventive care to individual needs. By exploring the intricacies of Prakriti, we gain a holistic perspective on well-being that aligns with contemporary healthcare challenges. Prakriti provides a framework for understanding individual differences in disease susceptibility and treatment response. This personalized approach resonates with the growing emphasis on P5 medicine: Predictive, Preventive, Personalized, Participatory, and Promotive healthcare. By tailoring interventions to an individual's Prakriti, Ayurveda empowers people to manage their health and prevent chronic diseases. The validation of Ayurvedic concepts through modern research opens new avenues for personalized prevention. By combining the wisdom of ancient texts with contemporary scientific methods, we can fully harness Ayurveda's potential to address modern health issues. This integration of traditional and modern knowledge offers a promising path towards a future where healthcare is truly personalized and focused on prevention.

Correlates of prakriti in modern science are being established through studies. A correlation between specific Human Leukocyte Antigen (HLA) alleles and Prakriti types were found. The HLA DRB1*02* allele was absent in individuals with Vata Prakriti, while the HLA DRB113 allele was absent in those with Kapha Prakriti. These findings suggest a potential genetic basis for Prakriti and its association with specific physiological and psychological traits. Studies have also explored the relationship between Prakriti and physiological markers. Vata Prakriti has been linked to lower body mass index (BMI) and higher levels of cortisol, while Pitta Prakriti has been associated with higher BMI and increased inflammatory markers. Kapha Prakriti, on the other hand, has been linked to higher levels of triglycerides and cholesterol. These intriguing findings suggest a deeper connection between our genetic makeup, physiological markers and Ayurvedic constitutions. In Heart rate variability study on extreme prakriti individuals, stark differences were observed as vata individuals exhibited higher heart rate variability showing an adaptable autonomic nervous system which is also flexible. Pitta extremes suggested rigid and reactive autonomic nervous system through lower heart rate variability. Kapha individuals exhibited intermediate levels of heart rate variability showing a balanced autonomic nervous system.

Ayurgenomics is an arising field which combines Ayurveda and genomics in a systemic way to create an efficient way to fill the gap. Ayurgenomics helps us to open to a larger scientific audience, thereby enabling an easier road towards personalised medicine through Ayurveda. Through this new bridge of study a rigorous understanding of prakriti at OMIC levels are being sought after. These studies have identified differences at biochemical and genome wide expression level between vata- pitta- kapha prakriti. In a study done by Aggarwal S et al. , they were able to establish molecular differences between expressed gene EGLN1 between prakriti,

which directly affected the high-altitude adaptation among them. They found certain genotypes of EGLN1 common in the pitta individuals were associated to greater adaptation to high altitudes while kapha genotypes were linked to increased risk of high altitude pulmonary edema (HAPE). Through a pilot study on Rheumatoid arthritis, Juyal R.C.et.al found the up-regulation of inflammatory genes in Vata dominant individuals, while Pitta and Kapha prakriti showed up-regulation of oxidative stress pathway genes. Similarly in a study by Ghadke et.al, a significant correlation between Ayurvedic Prakriti and specific genetic variations, particularly in the CYP2C19 gene. Vata individuals were more likely to have slower drug metabolism, while Pitta individuals were more likely to have faster metabolism.

Biochemical and genome wide expression levels were observed to be different between prakritis. Pitta showed over-expression of genes in immune response, higher Red blood cell count and haemoglobin. Kapha male individuals showed down regulation of genes involved in fibrinolysis and upregulation of genes linked with ATP and cofactor biosynthesis. Vata dominant males showed over-expression of genes linked to cell cycles, especially regulation of cyclin-dependent protein kinase activity and the regulation of enzyme activity

All these prove that the ancient wisdom can be harnessed to create a contemporary solution needed for the existing generation which can be sustainable alternative to the existing idea of personalized medicine. The individual genetic profiling will have a higher cost and complexity challenges. Thus, Ayurveda paves way to simplify the application of the much sought after way of personalised medicine and holds immense promise for revolutionizing healthcare toward optimal wellbeing.

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India's Forgotten Wealth- it's knowledge

Patwa Dharya Manishbhai

Indian Knowledge Systems become extremely wise accumulations of wisdom developed for centuries in different domains such as science, medicine, governance, and education, all coming from the ancient texts, like the Vedas, the Upanishads, and the Artha shastra. However, it's exactly this type of IKSs that places sustainability, connectedness, and well-being-all crucial concepts when faced with contemporary issues-by a greater level of importance today. Given environmental decay, higher prevalence rates for mental diseases, and even more than ethical governance crisis situations portrayed on the grandstand screens, time-tested IKS interventions combine old-time philosophy with realism. However, sustainable farming methods, Ayurvedic healthcare, or community-centric governance models are all there in Indian Knowledge Systems to be used for sustainable development and ethical living. This essay looks into the resilience of IKS in contemporary global challenges, making it clear how ancient practices and principles can lead the modern world toward a future that is more harmonious and balanced.

Indian Knowledge Systems (IKS) are well-established in the vast heritage of ancient texts such as the Vedas, Upanishads, Puranas, and Artha shastra, which span various disciplines like science, philosophy, governance, and medicine. These texts represent a holistic view of knowledge, integrating spiritual understanding with practical application to fulfil both social and individual requirements. A crucial element of IKS is the concept of interconnection, where life, its environmental support, human well-being, and social networks are regarded as parts of the greater entity. Thus, the Atharva Veda discusses ecological conservation; the need to purify water resources was prescribed through ceremonies that became a precursor to modern technologies in managing the environment. The Artha shastra by Chanakya contains the most elaborate direction in administration, distribution of resources, and economic feasibility that many of which are still applicable for modern policy development. The concepts in Indigenous Knowledge Systems are clear with agro techniques such as crop rotation and mixed farming, maintaining fertile soils and enduring productivity, unlike those of depleting practices in industrial agriculture. In a similar manner, Ayurveda's holistic approach in healthcare encompasses physical, mental, and environmental health, as shown by its emphasis on nutrition, yoga, and meditation for preventive measures. Contrasted with modern compartmentalized models that often fragment disciplines, IKS promotes the integration of knowledge, focusing on solutions that tackle the root causes rather than just symptoms. For example, whereas modern medicine might treat diseases with medicines, Ayurveda focuses on restoring balance through holistic treatments and lifestyle changes. This all-encompassing perspective not only highlights the uniqueness of IKS but also its ability to address contemporary issues by using tested wisdom.

The ancient practices offered solutions to the problems faced by ecosystems for thousands of years. Traditionally, Indian heritage has numerous enchanting traditions of water conservation. Exceptional in this category would be the concept of stepwells, in particular, Rani ki Vav of Gujarat. Rani ki Vav, dating back to the 11th century, is intricately designed as a stepwell to serve not only the purpose of storing water but also for it to work as a space for the community. It has several tiers of stairs by which people could reach water even in the driest seasons. The saving of biodiversity is also very deeply ingrained in Indian cultures, as they are held to be extremely important. For example, the indigenous people in Karnataka, especially in the

Kodagu region, have saved some of their groves from the devastating effects of the destruction of forests. For these locals, it's the Devarakadu; in honour of some deities worshiped within, which serve to bless their areas and areas outside it as well, to make the reserve thrive through this fostered biodiversity. This grove being preserved allows various species of plants, insects, and animals to flourish, thus striking a balance in ecological status and preventing further soil erosion. This tradition not only conserves the environment but also helps with the water cycle aspect of this region, thus proving that biodiversity and water conservation go hand-in-hand. Among the sustainable agricultures, traditional Indian modes of farming in the form of organic farming and Zero Budget Natural Farming by Subhash Palekar emerge as models of eco-friendly practices. Organic farming has been part of India since thousands of years. The Indian farmer used composts, manures, and traditional crop rotations to keep soil fertile. One such instance can be found in the farms of Uttarakhand, in which local farmers use organic technology passed on from generations. Such techniques have further resulted in maintaining the fertility of land as it is not using toxic chemicals or synthetic fertilizers. ZBNF is a technique in which the farmers do not spend expensive fertilizers and pesticides; hence, its cost comes to zero. The best example of ZBNF is found in Karnataka, where local inputs like cow dung and urine are used along with natural pesticides to increase crop yield and decrease costs. Focusing on soil health, water conservation, and preserving local biodiversity, these practices reflect deep knowledge of ecological balance in maintaining harmony with nature. All put together, these practices point to the fact that IKS puts into play the wisdom behind environmental sustainability, an ideal antidote to challenges and issues presented by modern challenges and circumstances such as climate change and the depletion of resources.

Ayurveda is one of the oldest systems of medicine in the world, where it provides preventive healthcare and enables one to keep three doshas, Vata, Pitta, and Kapha in a conducive ratio. In particular, Chyawanprash is taken for boosting immunity and maintaining general good health. Chyawanprash is one of the most effective herbal formulations prepared with ingredients such as amla (Indian gooseberry), ghee, and other medicinal herbs, which have been used over time for strengthening the immune system, enhancing digestion, and promoting vigor. It is popularly recognized as being used in fighting infections, boosting energy levels, and slowing down the aging process. This preventive approach is very strongly based in the philosophy of Ayurveda, which makes it possible through diet, exercise, and lifestyle to make choices that move away from the imbalances of life and not treat the illnesses when they may already be there. Yoga and meditation are integral components of IKS focused on mental and physical well-being. Yoga is actually the perfect mix of poses to stimulate all body parts, breathing techniques, and meditation in order to make an individual flexible, strong, and sound-minded. Meditation, in particular has long been known to the masses for its countless beneficial impacts on stress management or stress-related conditions and mental disorders. The great undertaking of the Art of Living programs, founded by Sri Ravi Shankar, is basically another example of how ancient practices have been adapted for the new millennium to address mental well-being. These programs include yoga, meditation, and breathing exercises such as Sudarshan Kriya to help people overcome stress, anxiety, and generally raise their emotional health levels. People who participate in these programs often report a greater sense of peace, reduced stress levels, and improved focus. This approach to mental health is particularly relevant in today's fast-paced world, where the demands of modern life often led to high levels of stress and burnout.

Indian Knowledge Systems fundamentally interpret governance and ethical leadership with principles that include moral responsibility, resource management, and community engagement. One foundational text in this regard is Arthashastra, written by Chanakya. This

sets down the principles of statecraft, management of resources, and the responsibility of a ruler. Going beyond the merely particular focus of governance as a practical aspect of resource management for prosperity, it makes sure to maintain justice. This text places emphasis on the competent administration, strategic use of state resources, and the good moral leader. If implemented today, these principles can end up finding expression in corporate governance where companies are described as being concerned with effective management, effective leadership, and transparency. For instance, companies embracing accountability, CSR, and sustainability initiatives are very much in line with Chanakya's argument regarding the ethical use of power and resources, whereby leadership benefits the organization and society at large. Dharma makes up the core of ethical leadership and defines what moral duty and righteousness is in decision-making steps. In the case of leadership, Dharma specifically means integrity leadership: doing fair justice and deciding issues for the greater good as opposed to personal gains. It can be found in the ethics of Mahatma Gandhi himself, who led the people by the values of truth, non-violence, and selfless service in a kind of leadership. His leadership in the Indian independence struggle took the form of dharmic approach and encouraged later leaders in political and corporate worlds to seek ethical leadership. For instance, the contemporary notions of CSR in firms are often inspired by the principles of Gandhi on 'service to mankind' through 'good business management,' including workers' welfare, minimization of environmental degradation, and social development in the community. Another key trend of IKS in governance involves the culture of community-led governance, which encourages alternative leadership and group choice-making. The Panchayat system traces its roots back to ancient India. With the model of local governance, wherein decision making at the local level makes sure that leadership is as close to the people as possible, solutions are designed to cater to the needs of the community being governed. Democracy is therefore its foundation, plus the respect that each and every citizen should accord one another; it emphasizes social cohesion, making the Panchayat Raj system a paradigmatic example in modern India. Decisions on local issues are, at all times, taken by elected representatives who are accountable to their communities. The most visible examples of participation through governance are Kerala's decentralization model and the role adopted by local self-governments in policy implementation and development for the community at large. Kerala's model has ensured better resource allocation, improved social indicators, and an overall sense of ownership by the community in governance. These examples from IKS highlight the importance of ethical leadership, resourceful management, and community involvement in governance. These knowledge systems serve as a lesson in learning methodology, in ethical decision making, and in keeping traditional knowledge.

Indian practices of education are experiential where practical experience is considered and used as a base for learning and teaching instead of theoretical knowledge. One of the oldest systems that have been reported is the Gurukul system, prevalent in ancient India. The Gurukul students stayed with their gurus and learned hands-on experience, oral discussion, and practical application of things. It was not confined to bookish education but involved all kinds of developments, like music, mathematics, and philosophy. Along these lines, Shantiniketan was established by Rabindranath Tagore. Tagore emphasized nature, creativity, and the liberty to learn by experience. Education at Shantiniketan was promoted in open, natural conditions, crossing the boundaries of the conventional classroom, developing a stronger bond between the individual and the world at large. Ethics in education has always played a key role in Indian pedagogy. The Bhagavad Gita, for instance, contains critical information regarding the decision-making process, moral obligations, and ethical responsibilities of leaders toward an individual. The Bhagavad Gita's teachings on karma yoga-the way of selfless action-and dharma-righteous duty-have inspired so many people to lead their lives both at work and home,

especially in how they approach ethical dilemmas. In the teaching, the educational world presents an impetus to make decisions based on a basis of morality rather than on one's self-interest. For instance, the Bhagavad Gita may explain the elements to guide educators and leaders to assist students in making decisions that put the welfare of society and the environment first. Modern educational systems are now increasingly adopting the concept of selfless service, which is termed as seva, wherein people are motivated to think beyond their shells and contribute positively towards the development of their communities. Finally, with rapid modernization sweeping across India, even the conservation of traditional knowledge has become a daunting task since many ancient texts, manuscripts, and oral traditions carry very important knowledge. Recognizing the critical importance of preserving such heritage, the Government of India launched the National Mission on Manuscripts to preserve and promote the vast collection of ancient manuscripts. This has culminated in cataloging, conserving, and digitizing thousands that otherwise would have had a very high chance of being lost. Digitization ensures this knowledge is accessible to the next generation and can be studied and disseminated all over the world. The digitization of all the traditional texts, from Vedic scriptures to philosophical treatises and scientific manuscripts, has made ancient knowledge much more accessible. At the same time, it is preserved for posterity. These efforts reflect the importance of learning not only from the past but also making sure that valuable traditional knowledge is part of the modern educational landscape. These examples illustrate the fact that Indian Knowledge Systems have always placed a premium on holistic education, ethical decision-making, and the preservation of knowledge, offering timeless principles that can be applied in today's world to foster a more ethical, experiential, and inclusive approach to education. This cardinal principle has been a part of cultural and economical practice of the country that shapes the policies and movements which still rules today. Swadeshi is an important economic conception derived from IKS that specifies focusing on local self-sufficiency by nursing indigenous industries. Swadeshi is now a major movement in the country's fight for independence, where there have been calls by leaders like Mahatma Gandhi to boycott foreign goods in support of local industries. This principle is quite akin to that of self reliance in so far as this emphasizes the development of one's community and nation's resources and industries rather than its dependency on external markets. This idea is reflected in make in India, which encourages the production of goods within the country and promotes local industries that have the effect of reducing imports. Swadeshi also promotes sustainable consumption and production patterns, which align with most of the ideas of sustainability in the modern world. For instance, local sourcing of material for construction and agriculture can enhance local economic development and is in line with the objectives of environmental sustainability. The cooperative model has also been a significant feature of the Indian economic and social framework. This model has been crucial in community-based economic activities. Traditional Indian society survives because mutual cooperation among people pools their efforts toward the greater good. The most successful examples in modern times would be the Amul cooperative in Gujarat, established in 1946. The Amul dairy cooperative epitomizes models that are readied to take on economic self-sufficiency and community development. It allows local farmers in dairy to pool their resources together, thereby strengthening their bargaining power while ensuring fair prices they receive. In the cooperative model, economic activity benefits are distributed among members rather than in the hands of a few. Amul not only proved to be the largest and the most successful dairy brands of India but also became a model for rural development and self-sufficiency, showing how cooperative models could strengthen people and create change in communities. A large part of the Indian economic and social policies has been based on the philosophy of inclusive growth and resource equivalence. The old systems in India called for equitable distribution of resources, and that reflects well through the modern initiatives that tend to reduce social inequality. The principles of Dharma

and Artha, which are the search for wealth and livelihood, have striven to utilize the concept of wealth for the upliftment of the underprivileged and to serve common good. Programs of contemporary policies like affirmative action, poverty alleviation plans, and microfinance plans epitomize the general purpose, that is, more inclusive growth for society and for the economy. One such program would be the Pradhan Mantri Jan Dhan Yojana, whose primary objective is to reach the unbanked population found in the countryside or other rural settings with a view to achieving financial inclusion. India is trying to reach a more balanced and just society where people from all walks of life have equal opportunities for proper growth. It aims to facilitate inclusive growth and equitable resources. Such examples from Indian Knowledge Systems show that the principles of self-sufficiency, cooperative models, and inclusive growth continue to both inform the economic and social development of India. Integration of such well-tested concepts into modern policies and practices will ensure a future India that is both equitable and sustainable. It indicates the eternal value and timelessness of these Indian Knowledge Systems in meeting challenges in any given time period and geographies of the world. From healthcare to sustainability, principles of IKS resonate across various spheres of activity, thus showing universal applicability, beyond Indian geographies. Indian traditional methods are also fast catching up on the international scenario of sustainability. For instance, the sacred grove concept, where an area is preserved for religious and ecological purposes, has inspired conservation globally. Sacred groves in areas like Kodagu have thus been crucial in maintaining biodiversity and ecological balance in India. This model has become an international reference in the adoption of community-led environmental conservation strategies. Such practices from India - organic farming and Zero Budget Natural Farming promoted by Subhash Palekar - are inspiring sustainable agriculture all over the world. Indian ideas on philosophy like Vasudhaiva Kutumbakam- the world is one family-follow global efforts promoting unity and cooperation in an effort to fight common challenges ranging from climate change, poverty, and inequality. Indian Knowledge Systems hold a treasure trove of tested wisdom that inspires solutions to the challenges of modern times. Ranging from advocacy for sustainability and holistic well-being to ethical leadership and inclusive development, the age-old practices remain relevant even today.

Their worldwide acceptance in yoga, Ayurveda, and sustainable agriculture indicates the universal value of India's heritage. We will reimmerse ourselves in the old cultures while paving the way to a new and more balanced, harmonious future. The IKS way of life reminds us that often-simple answers are linked with complexity, interconnection with disconnection, and humanity and nature with neglect.

Indian Knowledge Systems:
Relevance of ancient practices for contemporary problems

Vaishnavi P H

India has a plethora of resources, culture, religion, history, landscapes, politics and so forth, likewise the problems which it faces are also plenty. From 8000 BC to where we are now, the path was not the easiest, but they often did lead to beautiful destinations, as we have rightly witnessed from our journey for independence. The difficult paths haven't ceased to exist, it looms over the country in the form of poverty, pollution, farmer issues, gender inequality, educational disparities, child labour and what not.

India is estimated to be the largest economy of ancient and medieval world that is from 1st and 17th century AD, controlling one third and one fourth of the world's wealth. Hence it is only fitting that one likely place from where we can find the solutions to these problems is the former times. An excellent example of which is "Arthashastra" a work from the 3rd century BCE on statecraft, politics, military strategy and economic policies penned by Chanakya. It is a treasure trove of knowledge.

Corruption and inefficiency are present in contemporary India. "Arthashatra" mentions reward and punishment system as a way out. It stresses on accountability, check on officials and surveillance which can be applied for e-governance, anti-corruption bodies and transparent public delivery systems. Espionage, military preparations and diplomacy are discussed as solutions to political instability and terrorism. The graveness of sustainable development was mentioned way back in this work. According to Chankya the state was meant to protect wildlife and forest against the depletion of natural resources and environmental degradation. Everyone regardless of their background was given equal preference in front of law which is an answer to delays and bias in judicial systems. "Every neighbouring state is an enemy and the enemy's enemy is a friend", brings out the essence of forming alliance in times of need. To uncover the potential of a startups the effortless step is to answer the three questions by Chanakya in a satisfactory manner, "Before you start some work, always ask yourself three questions - Why am I doing it, What the results might be and Will I be successful". It is extraordinary how a person who is said to have existed almost 2200 years ago was able to decipher the issues that is applicable even today.

A horrific video of two women paraded naked in Manipur by a mob of men was out on social media not long back. They were allegedly gang raped. A female doctor was subjected to rape and murder while on duty on August 9th 2024 in Kolkata. Since, 2013 Human rights campaigns have tracked incidents of trans violence. The constitution of India's articles 14 to 18 guarantee the rights to equality, which prohibits discrimination based on religion, race, caste, sex, or place of birth. Still, the blind statue of justice fails its purpose. In the early vedic period women were treated with equal rights and respect as men. They were educated, free to participate in events and had the rights to choose their husband. The concept of 'Ardhangini' referring to a female partner or wife, portrays her as an equal and integral part of man. This came from the abstract of 'Ardhanarishwara' represented using the gods Shiva and his wife Parvati. Even the great god, the lord of the universe, the most masculine god, Shiva treats his wife as an equal, setting an example for his devotees. There is a character by the name of 'Shikandi' in the "Mahabharata" composed by Veda Vyasa, who is born as 'Shikandini'

daughter of Drupada and changes into a male to fulfil the purpose of killing 'Bhishma'. She rejected the limitations she had at birth and chose to change her sex to end up being the mythological precedent for trans-masculinity. Embracing the morale from the character's life will lend a hand to the contemporary generation in understanding the calibre of the transgenders regardless of their sex. 'Mohini', the female avatar of the Hindu God Vishnu is a transgender and queer icon. It is peculiar how people are ready to accept the deeds of God but not willing to caress it when their own counterparts do the same. These references from our scriptures lead to the conclusion that queer community did not emerge overnight. It was present in different forms and served different purposes. Their comparison to God conveys their importance and it is an indication of how humans, regardless of their sex should be showered with the same amount of love and respect.

Kailash Satyarti once said "Children should have pens in their hands, not tools". As contrary to this statement, in India 1.8 million to 3.3 million children are victims of child labour as per the analysis of data from PLFS 2018/19. Children are the future of the nation, if not educated they will have a severe lack of morale and may even end up as vagabonds or in worst case, criminals. Our history of 'Gurukulam' teaches us the value of educating children. In ancient India, sisya (students) would live under the same roof with their guru (teacher) and acquire knowledge from them. The vedic school of thought prescribes the 'gurukula' to all the individuals before the age of 8 at least by 12. A child's cognitive, language, motor skill and social development takes place from the age of 4 to 12. It is disappointing to see children doing mediocre jobs to make nickels and dimes. The even more devastating fact it that neither them nor their parents are bothered about education even when the Right to Education Act emphasizes on free and compulsory education for children between the age of 6 to 12. They are naively focused on the little income they make by doing whatever job they get.

Once upon a time there existed 'Kavu' (sacred groves) across the Malabar cost in Kerala. The story goes like this, Kerala was given as a donation to the Brahmins by Parashurama to save himself from the sins of killing several Kshathriya kings, but since the land was full of forests and poisonous snakes the Brahmins refused to stay there. As a solution Lord Shiva asked them to worship the king of snakes Vasuki, Anantha and Manasa, leading to the existence of 'Sarpa kavu' (snake groves). Embodying the mesmerising beauty of groves with a vast assortment of trees and animals, they also served as a habitat for the species. Snakes were protected and worshipped, along with the diverse species that existed within the protected land thereby curbing the chance of environmental degradation. In Hinduism several animals emblematize Gods. Ganesh - the Elephant God, Hanuman – the Monkey God, Cows are associated with goddess Kamadhenu, Tiger is considered as the vahana (vehicle) of goddess Durga symbolizing her strength and Peacocks are associated with Lord Krishna and is the vehicle of Lord Karthikeya, the god of war. Trees are also associated with religions, Ashoka tree is worshipped by Buddhists, Jains, and Hindus and is associated with Kama Deva (the God of Love). It is believed that the trinity resides in the Banyan tree. Bodhi tree is a sacred fig tree under which Buddha sat when he attained enlightenment. Neem tree, associated with Goddess Durga, is considered as a purifier and protector. Tulsi plant is worshipped in Hindu household and has plenty of ayurvedic properties. Parijata tree also known as 'Night flowering Jasmine', is said to have been brought from the heaven by Lord Krishna. These symbolism helps to protect these species from the verge of extinction. The anthropocentric approach which is widely prevalent in the contemporary society sees other species as secondary to humans which acts a catalyst in their depletion. Even though backed by superstitious believes, these representations contributed in reducing the harm inflicted

upon the environment. India has lost 90% of its land that comes under four biodiversity hotspots and 25 species have become extinct. The practices of our ancestors can come in handy in these dark times.

Cardiovascular diseases, Allergies and asthmas, Cancers, Life style related diseases like diabetes, high blood pressure, obesity, the list goes on. People have become accustomed to hearing these jargons. The not so surprising fact is that these diseases were not even close to common in the past as it is now. Human consumption has changed drastically over the period. What we eat is what we are becoming. High calorie and high sugar diets are leading to life style related diseases, air pollution is giving rise to asthmas and allergies, whereas industrial pollutants and smoking have caused cancer. The last straw is that the medicines which we consume to get rid of these diseases often comes with side effects. The most common example is that of paracetamol, a drug which Indians consume for anything and everything, is said to cause liver and kidney damage. Ayurveda is the oldest form of medicine that applies for a person's spiritual, mental and physical wellbeing. Ayurveda is based on the idea that the world constitutes of the five elements such as jala (water), vayu (air), Aakash (space), Prithvi (earth), and teja (fire). These elements in different combinations give rise to three humours, doshas called vata, kapha and pitta. "Charaka Samhita" (1000 BCE – 600 BCE), "Sushruta Samhita" (600 BCE – 400 BCE) and "Ashtanga Hridayam" (7th century CE) are some of the foundational ayurvedic texts with description of Doshas. The ratio of doshas in each person is different. The trick lies in devising dietary habits based on this ratio. A vata dominant person should consume warm food and drinks, avoid cold weather and maintain a warm body temperature. A kapha dominant person should exercise regularly, consume warm food and a healthy diet. A pitta dominant person should avoid extreme heat and spicy food.

Sticking to proper diet and natural remedies can reduce the occurrence of 80% of the chronic diseases. Endosulfan an organochlorine pesticide (OCP) which was sprayed on crops to control insects and mites, has left many in Kerala and other states with mental and physical disorders. For over 20 years, from 1980's to 1990's endosulfan was used as pesticide leaving people and animals with skin irritations, destruction of nerve tissue and reproductive damage.

Animals were born with deformities; Frogs, fishes, fireflies, jackals, bee colonies butterflies, monkeys and reptiles vanished from Kasargode and Palakkad districts of Kerala. Food itself was becoming poison. Organic farming is the best way to produce healthy food; using natural processing and preserving the environment. Ancient India practiced several farming techniques that were fruitful as well as harmless. Crop rotation, growing different types of crops in the same area helps to improve soil health. Organic manures are natural fertilizers that were used to maintain soil fertility. Even if the ancient techniques are not as fast or yielding as succumbing to the chemical fertilizers and insecticides, it is nevertheless not a threat to living beings.

It is ironical how people sacrifice their inner peace and physical wellness to attain wealth and luxury, later use the same wealth to get back the inner peace and physical strength. The mental and physical state of a being are interlinked. Exercises releases a hormone known as endorphine, neurotransmitters that help reduce stress, relieve pain, and improve your mood. Generation Z are not so mobile as compared to their ancestors, their movement being restricted to the to and fro travel between home and workplace that too in vehicles. Human body has very little to do as each day pass by. This lack of mobility is a contributing factor for the increase in visits to psychologist claiming to have depression, insomnia, anger issues

and stress. Obesity is another milestone which humans have successfully achieved with slothfulness. The solution which we have at our fingertips is Yoga. Yoga's origin can be traced back to 5000 years, hailing from north India, it is mentioned in "Rig veda". It is practiced in the Hindu, Jain and Buddhist traditions. "Any form of spiritual discipline aimed at gaining control over the mind with the ultimate aim of attaining liberation from rebirth" (Damien Keown). There are several yogic postures, each with its own benefits. Sarvangasana ("The queen of asanas") benefits the whole body, Mandukasana (The frog pose) improves flexinility, Hanumanasana (The monkey pose) aids in discipline and persistence and the butterfly pose helps with PCOD. Surya Namasakara signifying energy and gratitude is a comprehensive practice for both body and mind. It reduces cardio vascular diseases, aids weight management, improves digestive health, reduce stress, enhance concentration, promotes emotional balance and detoxifies our body. Going back to our roots is the one effortless way through which we can stabilize our lives.

It is true that a drastic change cannot be expected by adopting the ancient practices, but change will be present nonetheless. A farmer planted bamboos and nurtured them, for a few years no growth seemed to happen. After a few years, suddenly the bamboos started towering. In the beginning, growth wasn't visible above the ground, but it was happening in its roots. The strong roots supported the height of the bamboo. Adopting the lessons from our past will result in an incremental change where the result will be infallible. A comeback for the current generation is possible by adopting the ways of bygones. Our ancestors have taught us several foolproof ways to lead our lives. It doesn't consume any more of our time, effort or wealth to adopt these, it only takes will power and the motive to lead a better life. India is a developing country, but with the pace at which we are going and forgetting to live, it might not move on any further. It doesn't hurt to remember that everything is connected. The universe is whole and we are its prized possessions. Whatever we do, big or small leaves a mark, hence it is judicious to take a leaf out of our ancestor's books and do our part in a way that is healthy for both us and all around us.

Indian Knowledge Systems: Relevance of Ancient Practices for Contemporary Problems

Nihala

Indian knowledge systems, rooted in ancient traditions, offer profound insights that remain highly relevant in adressing contemporary global challenges. These systems, encompassing fields such as philosophy, mathematics, astronomy, medicine, and ecology, were designed not just to understand the world but to maintain harmony between human life and the environment. Practices like Ayurveda, yoga, sustainable agricultural methods, and concept of non-violence (Ahimsa) and interconnectedness (Sarvodaya) provide timeless wisdom that can help address pressing issues such as climate change, mental health, and social justice. In a rapidly modernizing world, revisiting and integrating these ancient practices into contemporary frameworks can offer holistic solutions, fostering a more balanced sustainable and ethical future. By learning from the depth and richness of Indian Knowledge systems, society can navigate the complexities of the modern age while preserving the well being of both humanity and the planet.

INTRODUCTION:

Indigenous education was imparted at home, in temples, pathshalas, tols, chatuspadis and gurukals. There were people in homes, villages and temples who guided young children in imbibing pious ways of life. Temples were also the centers of learning and took interest in the promotion of knowledge of our ancient system.

It explains how, when, and where people in India established their first civilization it describes how they launched business and stock rising, resulting in a stable and established lifestyle The ancient education system in India was characterized by its holistic approach to learning, emphasis on moral and spiritual development, and transmission of knowledge through oral traditions

BODY:

"We owe a lot to the ancient Indians, teaching us how to count. Without which most modern scientific discovaries would have been impossible'' - Albert Einstein

Indian civilization has accorded immense importance to knowledge - its amazingly vast body of intellectual texts, the world's largest collection of manuscripts, its attested tradition of texts , thinkers, and schools in so many domains of knowledge. In srimad Bhagvad Gita, Lord Krishna tells Arjuna that knowledge is the great purifier and liberator of the self. India's knowledge tradition is ancient and uninterrupted like the flow of the river Ganga, from the Vedas (Upanishads) to Sri centre of all inquiry.

The entire body of organised knowledge is divided into two sets in the knowledge of the ultimate principle, paramatma or Brahman example worldly knowledge. Accordingly, a distinction is made between jnana and vijnana, the knowledge of facts of the perceptible world. Over time, knowledge of different domains has been institutionalized into disciplines, or vidya and crafts, or kala. Indian disiplinary formations include fields as diverse as philosophy, architecture, grammar, mathematics astronomy, metrics, sociology, (dharmasasthra), economy and polity (arthasasthra), ethics (nitishasthra), geography, logic, military science, weaponry, agriculture, mining, trade and commerce, metallurgy, mining, shipbuilding, medicine, poetics,

biology, and veterinary science. In each of these, a continuous and cumulative series of texts continuous to be available despite the widespread loss and historically recorded destruction.

Tradition mentions 18 major vidyas, or theoretical disciplines and 64 kalas,.. applied or vocational disciplines, crafts. The 18 vidyas are: the four Vedas, the four subsidiary Vedas (Ayurveda- medicine, Dhanurveda- weaponry, Gandhharvaveda- music and Silpa- architecture), Purana, Nyana, Mimamsa, Dharmasasthra and Vedanga, the sixth auxiliary sciences, phonetics grammar, metre, astronomy, ritual, and philology- these formed the basis of the 18 sciences are concerned, there are competing enumerations of 64.

The first thing to note is the constructivisit dimension of Indian thought. At one time in its intellectual history, from 1000 BCE to almost CE 600, the Indian mind, it appears, was deeply immersed in empire - building, both of the terra firma and terra cognita. Few cultures can show such wide- ranging, structured systems of ideas in almost all spheres of human life as witnessed in India during this phase. This led to the generation of a vast stock of ideas, which imprinted itself on the Indian mind making it naturally reflecti,e and ideational.

The ancient Indian masters of politics- Kautilya, Bhishma, or Vidura - always followed the path of the realpolitik over the political ideologies. However, there were definite principles and theories upon which the foundation of the classical Indian polity was based. The specific vidya or brach of Indian knowledge systems dedicated to the discussions of those principles, theories, and experience based prescriptions was called dandaniti, the other three vidyas being anvisiki, trayi, and varta. Each of the vidyas has one or more lineage of masters who have created multiple schools of thought, thus preserving, expanding, and proliferating the Indian knowledge systems. For dandanati, the traditionally celebrated masters or acharyas are brhaspati, Sukra, Usanas, Bhishma, kautilya, kamandaka, to name a few.

Among these masters, Bhishma's tea chings throughout the shanti Parva and the Anuhasana Parva of Vyasa's Mahabharata stand out as an exhaustive commentary on this unique paradigm of assismilating and practicing power, polity, politics, and administration. In the extent of its treatment of dandaniti, it is paralleled only by the Arthashasthra.

It is now accepted that western criteria are not the sole benchmark by which other knowledge systems should be evaluated. While the term 'traditional' often implies 'primitive' or 'outdated' many of the traditional sciences and technologies were quite advanced even by present-day standards and better adapted to unique local conditions and needs than their 'modern' alternatives.

The United Nations defines 'Traditional knowledge systems as "Traditional Knowledge or local knowledge is a record of human achievement in comprehending the complexities of life and survival in often unfriendly environments. Traditional knowledge, which maybe technical, social, organisational, or cultural was obtained as part of the great human experiment of survival and development.''

Laura Nader describes the purpose of studying Traditional knowledge Systems " The point is to open up people's minds to other ways of looking and questioning, to change knowledge attitudes, to reframe the organisation of science - to formulate a way of thinking globally about traditions."

Modern science perhaps dates to Newton's times. But Traditional Knowledge Systems (TKS) date since more than 2 million years, when homo habilis started making his tools and interacting with nature. Since the dawn of the history different peoples have contributed to different branches of science and technology, often in a manner involving interactive contacts across cultures sepersted by large distances. This interactive influence is becoming clearer as the vast extent of global trade and cultural migration across vast distances is being recognised by researchers.

Not only in the field of dandaniti and rajadharma, the Indian was a land of sages and seers as well as a land of Scholars and scientists. Research has shown that from making the best steel in the world to teaching the world to count, India actively contributed to the field of science and technology centuries before modern laboratories wew established. Many theories and tecniques discovered by the ancient Indians have created and strengthned the fundamentals of modern science and technology. However, the vast and significant contributions made by the Indian sub-continent have been ignored. The British colonisers could never accept the fact that Indians were highly civilised even in the third millennium BCE when the British were still in a barbarian stage. Such acknowledgement would destroy the civilising mission of Europe that provided the intellectual justification for colonisation.

British Indologists did not study TKS, except to quietly document them as systems competing with their own and to facilitate the transfer of technology into britains Industrial revolution. What work found valuable was quickly appropriated, and its Indian manufacturers were forced out of business, and this was in many instances justified as civilising them. Meanwhile, a new history of India was fabricated to ensure that present and future generations of mentally colonised people would believe in the inferiority of their ancient knowledge. This has been called 'Macaulayism', named after Lord Maculay, who successfully championed this colonial strategy from the 1830

Arthasasthra

Kautilya also known as Chanakya or vishnugupta was the chief Minister and the brain behind King Chandra Gupta Maurya (317-293 BCE), which led to consolidation of the Mauryan empire and ushered in the Golden Age of India. It also put an end to the threat by the successors of King Alexander. The strategy helped in uniting the whole Indian sub-continent and sowed the seeds for the concept of the Indian nation. The Mauryn Empire not only spread across the sub-continent but extended in the west till the persion border and to myanmar in the east.

The strategy propounded by kautilya was treatise Arthasasthra, a comprehensive compendium of the art of ruling kingdom and defeating ones enemies. Versa states that " this work easy to learn and understand, precise in doctorine , sense and wordiness , has been composed by kautilya" lays to rest doubts about the authorship of this treatise . Morever , kautilya states right at the beginning that arthasasthra is a compedium of similar treatises written by earlier teachers. Subsequent works like Kamandakas's Nitisara , Dandins's Dashakumurachaita, Vishakadattas Mudrarshasha , and bhanabatta's kadambari give credence to the traditional Arthasasthra's dating and Authorship.

Conclusion

The relevance of ancient practices in the Indian Knowledge System (IKS) is profound, offering timeless insights into areas such as philosophy, medicine, sustainability, and spiritual growth. Practices such as Ayurveda, Yoga, and Vedanta, along with ancient scientific principles, have continued to resonate through centuries, proving their adaptability and importance in the modern world.

The holistic approach of the Indian Knowledge System, which integrates body, mind, and spirit, offers valuable solutions for contemporary challenges like stress, environmental sustainability, and health. The emphasis on interconnectedness and harmony within nature aligns well with today's growing focus on ecological balance and mental well-being.

In conclusion, ancient Indian practices offer deep wisdom that can be relevant and beneficial today, provided they are adapted thoughtfully to the needs of the present. Their rich, multidisciplinary foundation holds immense potential for shaping a balanced and enlightened future, bridging the gap between tradition and modernity.

The Indian Knowledge System (IKS), rooted in ancient practices, remains highly relevant in the modern world, offering profound solutions to contemporary challenges. Practices like Ayurveda, Yoga, and Vedanta emphasize holistic well-being, connecting the mind, body, and spirit. Ayurveda's approach to health through natural remedies and balance is increasingly relevant in a world grappling with lifestyle diseases, while Yoga provides tools for mental health and stress management. Philosophical principles such as Ahimsa (non-violence) and Dharma (righteous living) offer ethical guidelines that promote harmony in both individual lives and society at large. Furthermore, the environmental wisdom embedded in Indian traditions, such as the concept of Vasudhaiva Kutumbakam (the world is one family), emphasizes sustainable living and ecological stewardship, aligning with modern global efforts to combat climate change. The ethical teachings of ancient texts, alongside advancements in mathematics and astronomy, also demonstrate that IKS contributed significantly to science and technology. In sum, the Indian Knowledge System offers a timeless framework for personal growth, social harmony, and environmental sustainability, making it a crucial resource for addressing today's multifaceted challenges.

Indian Knowledge Systems: Relevance of Ancient Practices for Contemporary problems

Neelima Matade

Problems

Introduction

India, a land steeped in rich cultural heritage and profound philosophical traditions, has long been regarded as a beacon of wisdom and enlightenment. Its ancient philosophies, deeply rooted in spiritual and ethical principles, continue to offer valuable insights into the human condition providing a compass for personal growth, societal harmony and a meaningful existence. The Indian Philosophical Landscape is a vibrant tapestry of diverse schools of thought, each with its unique perspective on the nature of reality, the purpose of life, and the path of liberation. These philosophies have enriched human understanding and continue to shape the way we perceive and interact with the world around us. Vedanta, one of the most prominent Indian philosophies, delves in to the nature of ultimate reality. It posits that the supreme consciousness is the essence of all existence and that the individual soul is the integral part of this universal consciousness.

While these philosophies and values originated centuries ago, their relevance remains as profound today as it was in ancient times. They offer a timeless framework for navigating the complexities of modern life, guiding personal relationships; ethical decision-making and achieving a sense of purpose and fulfillment. In a world grappling with challenges such as environmental degradation, social unrest and personal struggles, these ancient teachings offer a beacon of hope and wisdom. They remind us of our interconnectedness with all living beings, the importance of ethical conduct and the pursuit of a meaningful existence that transcends material gains.

Today we will deep dive into how a simple philosophy of Advaita Vedanta provides answers to the prominent problems the world is facing today. The simple philosophy is "Naham Dehasmi (Na Aham Dehasmi), Aham Brahmasmi" from Ashta vakra Geeta which means I am not the body (nor the body is mine), I am consciousness. The problems we are facing today and the implications of the philosophy are discussed below

The problem of Climate change & over consumption

Climate change is the biggest threat than the humankind is facing today. According to NASA, global climate change is not a future problem. Changes to Earth's climate, driven by increased human emissions of heat-trapping greenhouse gases are already having widespread effects on the environment: glaciers and ice sheets are shrinking, river and lake ice is breaking up earlier, plant and animal geographic ranges are shifting and plants and trees are blooming sooner.

The climate change is directly related to overconsumption. The present century is the century of consumerism where the happiness of a person is directly related to the stuff that he buys and to identify one's identity through what they own. It is a social order where people aspire to acquire goods and services beyond those necessary for survival or traditional displays of status. The production and use of household products and services generates a huge amount of greenhouse gases, accounting for as much as 60% of global emissions. As more people move in to middle and higher class and their wealth increases the problem is worsening. Once basic needs are met, people often turn to products as an expression of their social status. As

people strive for higher status, their demand for expensive items increases symbolizing that status increase. The production of these goods contributes to greenhouse gas emissions, leading to climate change. While technology can provide energy efficient solutions that can help combat climate change, the growth in consumption has largely outpaced the benefits of technological advances in recent decades. This means that simply 'greening 'our purchases i.e., buying more sustainably produced products, is not enough. It is necessary to reduce consumption itself. One of the key factors contributing to consumerism is ubiquitous advertising and aggressive marketing. Companies carefully shape our wants and needs through attractive advertising campaigns that convince us that owning certain products, are the key to happiness, success and social acceptance. In addition, increased globalization and technological developments are making products from around the world more readily available to consumers. Internet commerce and international supply chains enable fast and convenient shopping, which can lead to increased consumption.

The implications of the Philosophy

If we carefully analyze the problem of over consumption, it is directly related to the person's identification with the body itself. The philosophy of "Naham Dehasmi" emphasizing that you are not the body can show a definite answer to the growing problem of over consumption. When there is a perspective change in the people that consumption is the only way to happiness the right philosophical shift can only answer the problem. When people stop identifying themselves with the body itself the over consumption automatically stops which indeed stops the negative effects of climate change. The philosophy falsifies the relation between consumption and happiness. When people understand this concept they consume only what is necessary which reduces over production which in turn reduces the climate change.

The problem of Gender inequality

In the modern civilized world, we still face the problem of gender inequalities where access to rights, resources and opportunities is unequally distributed between genders. This division based on gender leads to social unrest, economic disparities and hinders overall progress. Though the eminent thinkers accept that gender equality not just benefits women but the human race as whole, ultimate gender equality is still a far cry. In many societies, traditional gender roles and stereotypes continue to perpetuate inequality. Women are often expected to prioritize domestic responsibilities, limiting their opportunities for education, employment and personal growth. Though there are many laws created for the support of women and women empowerment became the priority of many governments in the present century the actual equality in real terms is not achieved as the problem is deep rooted with the identification of the person itself.

The implications of the philosophy

The concept of "Naham Dehasmi" has radical implications for our understanding of gender and identity. If the true self is not defined by the physical body, then the social constructs of gender become less significant. This challenges the idea that women are defined solely by their biological sex and the roles assigned to them within patriarchal societies. The philosophy encourages us to see beyond superficial differences and recognize the fundamental interconnectedness of all beings. This philosophical shift encourages us to see ourselves and others as interconnected beings rather separate and competitive entities. By understanding that our true nature is beyond gender, we can pave the way for a more equitable and harmonious society.

The problem of Social Discrimination

Discrimination based on caste, creed, and colour is a complex and deeply rooted social issue that has plagued societies throughout history. It manifests in various forms, ranging from subtle biases to overt acts of violence and oppression. Caste discrimination, particularly prevalent in India, is a hierarchical system that assigns individuals to social groups based on their birth. This system often dictates access to education, employment, and social opportunities, leading to significant disparities in economic and social outcomes. Creed-based discrimination targets individuals based on their religious beliefs or lack thereof. It can manifest in various ways, such as denying individuals access to services, employment, or housing based on their religious affiliation. Religious intolerance and persecution can also lead to violence and displacement. Colour-based discrimination, commonly known as racism, is a form of prejudice and discrimination based on a person's skin colour or perceived racial identity. It has a long and complex history, with roots in colonialism and slavery. Racism can manifest in both overt and covert ways, leading to systemic inequalities in areas such as education, employment, and the criminal justice system. The consequences of discrimination based on caste, creed, and colour are far-reaching and devastating. They can lead to social exclusion, economic marginalization, and psychological trauma. These forms of discrimination also undermine social cohesion and perpetuate cycles of poverty and violence. While progress has been made in combating these forms of discrimination, they continue to persist in many parts of the world, perpetuating inequality and hindering social progress.

The implications of the philosophy

The philosophy offers a powerful lens through which to examine the deeply rooted issues of caste, creed, color etc. By emphasizing the illusory nature of the self, the "Naham Dehasmi" philosophy challenges the notion of inherent superiority or inferiority based on birth. This perspective encourages us to see beyond the superficial divisions of caste and recognize the fundamental interconnectedness of all human beings. Embracing the principles of philosophy can foster a more inclusive and equitable society where individuals are valued for their intrinsic worth, rather than their social standing.

Conclusion

Philosophy can help people better understand themselves, their place in the world and their existence. Philosophy often changes how people think and can lead to self-discovery and self-renewal. The Indian philosophy mainly Advaita Vedata is a time bound philosophy which has the potential to answer the modern day problems. The Practical implications of "Naham Dehasmi" in Advaita Vedanta are profound and far reaching. Realizing that we are not limited to the physical body can help us overcome ego-centric tendencies and cultivate a sense of oneness with all beings. The body will be restricted to mere instrument. By detaching from the body's desires and attachments, we can focus on living a life aligned with our true values and purpose. The realization of "Naham Dehasmi" can lead to deep sense of inner peace and fulfillment that is not dependent on external circumstances. The principle of non-attachment to the material self encourages a detachment from compulsive need for material possessions & societal structures. This reduces the tendency of over consumption & helps in construction of a more equitable society. However, it is important to note that the realization of Naham Dehasmi is not a sudden event but a gradual process of self-discovery. It requires consistent efforts & self-reflection.

Indian Knowledge Systems:
Relevance of Ancient Practices to Contemporary Problems

Leelamritha.V.V

Ancient practices can play a great and a helpful role in addressing the Contemporary problems the world is facing. The ancient systems include philosophy, science, medicine, mathematics and ecology provide an inclusive framework that stabilizes the plagues faced by the world. There are many ways in which we can utilize the ways and methods our ancestors used to get rid of our frequently occurring dilemmas. Here are a few methods we can use to solve the Contemporary problems:

1) **Environmental Sustainability**
   ❖ Ancient practices
      ➢ Ancient Indian Agriculture was based on long-lasting practices that incorporated organic farming, crop diversity and water conservation methods. It emphasized the use of organic fertilizers, crop rotation and protection of soil fertility.
      ➢ Sacred woods-In the ancient times specific groves or forests were secured for their spiritual significance, sustaining biodiversity.
   ❖ Contemporary problems
      ➢ Soil Degradation-The over use of chemical fertilizers and monoculture of crops has resulted in soil degradation.
      ➢ Water Scarcity- The global availability of water has been decreased due to too much extraction of underground water and maltreatment of water resources.
   ❖ Utilizing Ancient Practices
      ➢ Sacred Groves- Bringing back the concept of protected ecological spaces help conserve biodiversity and restore ecosystems.
      ➢ Water Conservation- Methodologies like rainwater harvesting can be taken up to conserve and utilize water in the right manner

2) **Personal Development**
   ❖ Ancient practices
   ➢ Meditation- It helps promote self-awareness, mental peace and also emotional regulation.
   ❖ Contemporary problems
   ➢ Mental health issues- Many people experience depression, anxiety and stress due to work pressures and technological dependence
   ❖ Utilizing Ancient Practices
   ➢ Mindfulness Meditation-Incorporating Ancient Meditation practices to improve mental, social, and emotional balance.

3) **Education Systems**
   ❖ Ancient practices
   ➢ Gurukul System- It is a traditional system where students learned through face to face interaction with the students and the main aim was educating the children on practical knowledge, ethics and personal development.
       ➢ Vedic mathematics and astronomy- The ancient texts preserve advanced knowledge in mathematics and astronomy which was purely based on logical reasoning.
   ❖ Contemporary Problems
       ➢ Educational Inequality-Many little ones all over the world are unable to get education because of poverty, racial discrimination, child marriage and many other reasons. Many girls are not getting education due to gender discrimination.
       ➢ Technological Disruption- The evolution of technology requires constant learning and traditional education systems often fail to keep up.
   ❖ Utilizing Ancient Practices
       ➢ Holistic Education- Incorporating the Gurukul System will help in experiental learning, personal development and many more qualities which will help the child be a Good Samaritan in the society.

4) **Governance and Leadership**
   ❖ Ancient practices
       ➢ Arthashastra- A thesis by Chanakya that emphasizes leadership state craft, economics and law.
       ➢ Panchayat Raj System – It is a traditional system of self-government
   ❖ Contemporary problems
       ➢ Corruption- It leads to lack of accountability, disrupts transparency in the administration, creates bureaucratic loopholes and leads to many frauds.
       ➢ Political Polarization-It increases divisions in the society especially in the democratic nations.
   ❖ Utilizing Ancient Practices
       ➢ Arthashastra Principles – Applying the principles like transparency, accountability and the importance of a well oriented and disciplined

economy will help the modern governance

- ➢ Decentralized Governance-Bring back certain elements of Panchayat Raj System to ensure that all the locals have a voice of their own and that leaders should represent the people.

5) **Health and Medicine**
   - ❖ Ancient practices
     - ➢ Ayurveda- A system that ensures balance between the mind, body and the environment. It uses natural herbs, dietary regulations and treatments like yoga and meditation to prevent illness.
     - ➢ Yoga and Meditation-Practices that foster physical, mental and spiritual well- being, offering preventive solutions to physical and mental ailments.
   - ❖ Contemporary problems
     - ➢ Chronic Diseases-Rising rates of non-communicable diseases like diabetes, hypertension, and heart diseases due to sedentary lifestyles, poor diet and stress.
   - ➢ Mental Health Crisis-Increasing levels of stress, anxiety and depression, especially in urban populations.
   - ❖ Utilizing Ancient Practices
     - ➢ Ayurvedic remedies – Adopt Ayurveda's focus on prevention through a balanced diet herbal treatments and detoxification to reduce the impact of lifestyle diseases.
     - ➢ Yoga and Meditation-Integrate yoga and mindfulness practices into daily routines to manage stress, improve mental health and enhance physical fitness.

6) **Social and ethical issues**
   - ❖ Ancient practices
     - ➢ Ahimsa (Non-Violence)- It's a core principle of many Indian philosophical traditions.
     - ➢ Dharma(Righteousness)- Dharma emphasizes moral and ethical living, promoting justice, equality and duty.
   - ❖ Contemporary problems
     - ➢ Social Inequality-It increases the gaps in wealth, education and access to basic facilities.
     - ➢ Ethical Dilemmas-Exploitation, corruption and ethical decay in all the sectors of economy.
   - ❖ Utilizing Ancient Practices
     - ➢ Dharma-based Leadership-Leaders and policymakers should adopt principles of dharma such as justice, welfare and responsibility for all.
     - ➢ Ahimsa and Conflict Resources-Bringing back nonviolent conflict resolution in both personal disputes and communal societal conflicts can contribute to a more peaceful environment.

Importance of Traditional Knowledge in Solving Current Problems – A Case of Indian Systems of Knowledge

Indian Knowledge Systems (IKS) are based on a scientific, philosophical, and spiritual tradition that has made a significant contribution to the development of various domains, including medicine, agriculture, astronomy, architecture, and education. IKS are also profoundly tied to India's cultural and ecological context; hence they remain relevant in trying to find solutions for today's global challenges. IKS provide sustainable answers in times in which in inescapable technological progress is coupled with environmental degradation and socio-economic inequalities-and answers that deserve a second look. Ayurveda: Holistic Health and Wellness

One of the oldest and most important components of IKS is Ayurveda, the ancient system of medicine that embraces a holistic approach to well-being. While modern allopathic medicine seeks to treat specific diseases, Ayurveda promotes harmony within the body, mind, and spirit. This focus on preventive care, lifestyle changes, and natural remedies is much needed in an era when chronic lifestyle-related ailments like diabetes, hypertension, and stress-induced disorders have become common worldwide. The individualized treatment principle is one of several that characterize Ayurveda as a practice; it forms the basis upon which doshas (body energies), diet, herbal medicine, and psychological well-being are integrated. The narrative here provided is in stark contrast to that created by an excessive reliance on pharmaceutical interventions. As allopathic medicine continues to treat its patients with side effect-laden drugs and antibiotics resistance has come to pose a serious threat to public health., the Ayurvedic approach will gracefully add to conventional treatments for promoting overall health features of patients.

Sustainable Agriculture: Traditional Farming Practices

Agro ecological traditions epitomizing the characteristics of Indian agriculture through the ages are marked by immense sustainability, biodiversity, and resourcefulness in managing natural resources. Techniques for organic farming, use of indigenous seeds, crop diversity, and natural pest management have been applied harmoniously within local ecosystems' frameworks. In astride industrial agricultural practices that highly depend on chemical fertilizers and pesticides Traditional Indian Agricultural Knowledge offers insights into lessons learned that can be applied to reduce environmental harm while achieving food security. Many systems-oriented approaches like Vedic farming and cow-based organic farming are gaining traction as sustainable alternatives to modern, chemically dependent agriculture- an effort contributing to the global battle against climate change. Yoga and Meditation: Mental Health and Stress Relief

Yoga and meditation, integral parts of Indian Knowledge Systems, have been used traditionally for the attainment of mental and physical well-being. In this contemporary world, which is largely dominated by the prevalence of psychological disorders like anxiety, depression, and stress, yoga and meditation offer excellent modalities for self-regulation, mindfulness and emotional equilibrium. Pranayama (breathing exercises), asanas (physical postures), and dhyana (meditation) comprise effective tools to alleviate stress, enhance mental faculties, and

generate inner peace. Such activities are being incorporated in educational institutions, professional realms, and therapeutic environments to boost efficiency along with psychological clarity and to enrich the general lifestyle of people. The worldwide appeal of yoga indicates its effectiveness in promoting good mental as well as physical health.

The Importance of Indian Knowledge Systems and Ancient Practices in Solving Contemporary Challenges

India, with its rich and diverse cultural heritage, has made immense contributions to the legacies of world intellectual traditions. Indian knowledge systems (IKS) include all the disciplines ranging from philosophy to science, mathematics, medicine, arts, and ecology. Their roots lie in ancient texts, practices, and oral traditions that have shaped themselves over millennia; their relevance to contemporary problems is often overlooked in modern discussions. However, Indian knowledge systems- holistic and sustainable principles give an excellent view for addressing many challenges that are alive today. Thus the present IKS essay into which how the embedded ancient practices can help address contemporary global issues most needful at present in areas like social harmony healthcare sustainability of the environment.

Environmental Sustainability

One of the most crucial challenges facing current society is that of environmental degradation. The eco-balance is changing at an alarming rate due to deforestation, pollution, depletion of biodiversity, and change in climate. Great Indian ancient wisdoms, especially those in ecology and cosmology, stress how all forms of life are interconnected as well as with nature. The concept of **"Vasudhaiva Kutumbakam,"** or the notion that the world is one family, found in such ancient texts as the **Vedas** and **Upanishads**, calls for harmony among human beings and their environment. For example, in ancient India, the practice of **Agroforestry** combining trees with crops was observed as a sustainable agricultural system promoting biodiversity and preventing soil erosion. The concept of **sacred groves** where specific forests or natural areas were conserved for their spiritual value also contributed to the maintenance of local ecosystems. Such traditional practices can today be adapted and integrated into modern efforts toward environmental conservation aimed at sustainable land use and forest management.

Holistic Healthcare and Traditional Medicine

Ancient Indian knowledge systems, especially Ayurveda and Yoga, offer holistic approaches to health and well-being in the modern world. As an ancient system of medicine, Ayurveda stresses balance among the body, mind, and spirit of a person. According to it, diseases arise due to imbalances within the three doshas (Vata, Pitta, and Kapha) of the body and provide individualized treatments through diet, herbs, and lifestyle changes. In such times when modern medicine oftentimes is criticized for treating symptoms instead of causes , Ayurveda's focus on prevention and holistic healing provides complementary solutions to many challenges faced by global health.

Yoga is a practice that originated in India more than 5,000 years ago as a system for improving both mental and physical health through various kinds of asanas, pranayama, and dhyana. The crisis of mental health is increasingly highlighted in the fast-paced and highly stressful world

that today exists. Yoga and mindfulness meditation are helpful practices to effectively confront stress, anxiety, and depression. Scientific confirmation about the effectiveness of these practices to reduce stress increase concentration and enhance emotional well-being makes them relevant today in modern healthcare.

Indian Knowledge Systems (IKS) includes a range of practices such as wisdom and traditions that date back thousands of years. These systems are integral to the culture as well as to the spiritual and scientific life of the people of India. Various aspects such as philosophy, mathematics, astronomy, medicine, agriculture and ecology, among others, are encompassed within these systems. As today's society is faced with a number of complex challenges, there is an increasing focus on these ancient practices as they were in the past able to provide holistic and sustainable solutions to prevailing challenges.

Most crucial aspect of IKS is the focus on connectedness. Ancient Indian traditions like Vedanta and Yoga believe in the Oneness of all that exists and call for harmonious relationships between human beings and nature and the cosmos. This philosophy provides a practical approach to the

contemporary environmental disasters brought on by climate change, deforestation, loss of biodiversity, and other unwise practices. Ancient scriptures enshrine Ahimsa (non-violence) and Sustainable Living advocating for a lifestyle with little disturbance to nature. This integrative perspective is becoming more and more relevant since current growth seldom considers ecological impacts.

In the field of healthcare, Ayurveda, which is a system of medicine and is considered more than just herbal drugs, promotes the philosophy of personalized medicine, proactive approach, and balance between the mind, physical body and spirit. It's natural to concern with the health problems originating from over-dependency on synthetic drugs and its contraindications. In this era fraught with life style diseases such as diabetes, hypertension and mental health problems, ayurveda therapeutics, with its emphasis on prevention and holistic approach seems the need of the time. Ayurveda seems to be blessed with health maintenance strategies for remediation of chronic and systemic diseases.

In addition, Indian knowledge systems have bearings in the fields of education and ethics as well. Learning in the Indian subcontinent in ancient times was conducted in 'Gurukulas' or master's house; there was an emphasis on moral values and reasoning abilities. These differ from the current education trend in which attention is placed on mechanistic learning — an educational trend which in the past encouraged the development of creativity, ethics and constructive feelings which are critical to the present society challenges.

Further, organic farming, which was part of traditional farming system of Indian culture, is in agreement with current practices of eco-friendly farming. Ancient Indian approach "Prakriti" insists on adoption of regional approach of cleanliness and ecological agriculture that supports soil and biodiversity conservation and makes sense in addressing modern day's issues.

In conclusion, the Indian Knowledge Systems (IKS) has a diverse and rich heritage which is off immense wisdom that is relevant in handling the current issue at hand and other challenges. These line of abandon practices stem from a long history of observations, thought, and philosophy aiming at addressing present day challenges in an environmentally friendly, healthy, and socioculturally balanced manner. In today's world, which is over other dominated by technology and the materialism mindset, the IKS brings an important balance between people and the environment, the body and the mind, the singular and the group.

The Indian perspective those being features in the Veda, the Upanishads and other classical text are all inclusive, they do not only focus on progress of material but rather the development of the mind as well. This notion of integrating the physical and mental and spiritual together is a solution to the division and pressure form that is brought forth by the modern world and its lifestyle. The spread of yoga and meditation around the globe showcases their effectiveness for the stress, mental clarity, and calmness.

In addition, ancient Indian knowledge systems emphasize a great deal on nature and its cycles, and how such knowledge can assist in addressing the current environmental crises. Practices such as organic farming, respect of biodiversity, and sustainable policies on water, are in sharp contrast to the current industrial systems of agriculture which capitalize them. These practices of old hint at paths to address the greater challenges of environmental degradation and climate change. The Indian saying "Vasudhaiva Kutumbakam" meaning, the World is one family, reflects such a sense of being interrelated, and calls for consideration beyond one's national or individual concerns towards a more universal perspective that also includes all other species.

On the other hand, and elsewhere in life, social and ethical systems are supplemented by 'dharma' in ancient India, which urges an individual to perform their responsibilities bearing in mind the morals and the larger society and nature. This focus on righteous living and duty to society provides the moral framework needed to tackle such burning issues like inequalities, poverty, social justice.

Concern for the common good and compassion found in Indian thought can help constructive social action in the present context to pursue such social aims as inclusiveness, equality, and respect of differences.

Bringing these ancient practices back and weaving them into the modem context does not really mean one has to dismiss the current progress made in science and technology. Rather, it is a celebration where people acknowledge that the knowledge and understanding of former generations is an addition to the inventions done in the present age. Thereby, creating enabling conditions gives us a moralistic, sustainable and fair world. The significance of Indian knowledge systems and remedying modern day challenges is in their capability to consolidate history with the current temporal. In the present, the physical and the non-physical and the self and the society create possibilities to a more peaceful domestic environment for everyone in the future.

Indian Knowledge System—Traditional Practices and Modern Problems and Solutions to the Challenges to Overcome.

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Md Raiyan Hussain

" Knowledge can only be volunteered it cannot be conscripted"

Introduction

The Indian Knowledge System (IKS) is a comprehensive body of indigenous knowledge that includes all the aspects of life from philosophy and science to mathematics and medicine, art, governance and education. Rooted in ancient scriptures like the Vedas, Upanishads, and classical texts such as the Arthashastra and Charaka Samhita, the IKS offers holistic, sustainable, and ethical perspectives on human development. At present, in the modern context of coexisting current problems such as environmental pollution, mental disorder, social instability, it is extremely significant to revive and reformulate these old systems into the contemporary education and administration.

India's educational reforms as advocated by commissions, such as the Kothari Commission (1964-66) and the Dr. Sarvepalli Radhakrishnan's University Education Commission (1948-49) and by contemporary policy instruments (e.g., Right to Education Act, 2009) and the National Education Policy (NEP) 2020, leads towards development of a knowledge ecosystem that integrates modern science with traditional wisdom. This essay explores the relevance of IKS in addressing contemporary challenges, outlines solutions to overcome the obstacles to its implementation, and concludes with recommendations on how to integrate ancient wisdom into the modern education system.

The Indian Education System Over Thousands of Years: Vedic to Present

History of Indian education dates back more than 3,000 years ago with the development of the Indian nation during the Vedic Period, marked by rich spiritual philosophies and the social and political structures shaping various education philosophies for over a century. So, from the Vedic period to the present times, Indian education has undergone great change. These have reflected changing societal values, governance, and the global context. The journey from the Vedic gurukulas to the present schooling system is one of continuity and transformation.

1. Vedic Period (1500 BCE - 500 BCE)

Indian early education dates back to the Vedic period, the beginning of which was mainly concerning with conferring knowledge of the Vedas, which were, in fact, the divine literature of Hinduism. Basically oral education, it was disseminated orally. The Vedas contained hymns, ritualistic ceremonies, and intellectual knowledge that required deep contemplation over language, grammar, and metaphysics.

Gurukula System:

Education during the Vedic period was given in gurukulas, informal educational centers usually situated in the forests or village outskirts. The system was characterized by personal, one-on-one interaction between the guru (teacher) and the shishya (student). Learning took place in a residential setup where the students were housed in the guru's residence and studied not only religious texts but also subjects such as astronomy,

mathematics, and ethics. It was considered a sacred relationship of guru and disciple that respect and discipline governed.

It was during this time that the Brahmanical education system began to develop, which was more or less religious in character, focusing more on Sanskrit learning, rituals, and philosophy. It was mainly male students from the higher castes, specifically the Brahmins, who were allowed to receive education. However, there were some exceptions. Women were not given formal education but were also not devoid of knowledge as there were learned scholars like Gargi and Maitreyee.

2. Buddhist Era (500 BCE - 1200 CE)
Buddhism marked a significant change in the Indian education system. The Buddhist monasteries, or Viharas, became centers of learning and were more inclusive. They were open to people from all walks of life, including women and lower castes, unlike the Brahmanical gurukulas, which were exclusive.

Nalanda University:
This was a time when there were establishments of educational institutions such as Nalanda University, which was very important for formalizing education. Nalanda was one of the first residential universities in the world. It flourished from the 5th to the 12th century CE. Scholars from all over the world, including China, Korea, Japan, and Southeast Asia, visited this place. In Nalanda, curriculums were about logic, metaphysics, medicine, astronomy, and grammar. It was a golden period, when an immense attention was paid to argumentation, critical thinking, and above all to the pursuit of knowledge solely for understanding and learning purposes.

3. Medieval Period (1200 CE-1800 CE)
There was a period of establishment of Islamic rule in the region, and it brought forward with it an altogether different set-up toward education. The establishment of the first ever Islamic madrasas brought this innovation to India. Persian gradually found its place as the language of teaching.

Madrasas and Islamic Influence:
Under the Delhi Sultanate and Mughal Empire, madrasa flourished. Subjects taught here included law, theology, literature, mathematics, astronomy, and medicine. But education was still largely out of the reach of people in general and was only available to the elites in particular: the aristocracy and Muslim community.

The Mughal emperors, especially Akbar, did much to promote education by establishing institutions like the Fatehpur Sikri madrasa, which taught subjects like history, mathematics, and philosophy. Akbar also introduced a degree of inclusiveness by promoting a bilingual education system, combining Persian and local languages.

4. British Colonial Period (1800 CE - 1947 CE)
The most significant change to have touched Indian education was by the British colonial regime. British system of education was primarily organized as a formal and centralized mainly for the production of the class of clerks and administrators to be used in the colonial regime. That period initiated modern education into India, though very frequently criticized as elitist serving the interests of the colonizers.

Macauley's Minute (1835):
It was this decision that was formalized by the famous Minute on Education written by Thomas Babington Macaulay in 1835. The argument went that English was a better language and that Western education would give Indians science and literature for the elite class. It set off the establishment of schools on English-medium, which would cater more or less to the upper classes, as well as the introduction of scientific and philosophical ideas from the West.

Missionary Schools and Spread of Education:
Christian missionaries played a great role in spreading education in India, particularly among women and other marginalized sections. The missionary schools, for instance, those of the Jesuits, spread all over the subcontinent and helped raise the literacy level though they were usually directed to the religious conversion.

The University System:
During the British period, University of Calcutta (1857), University of Bombay (1857), and University of Madras (1857) were established, following the British pattern of universities. These institutions offered degrees in arts, sciences, and law, and became centers of importance in higher education.

5. Post-Independence Period (1947 CE - Present)
After India gained its independence in 1947, the country faced the vast challenge of building a modern education system that could cater for its diverse population. Areas of focus included promoting literacy, technical education, and access to education in the urban and rural areas as well.

The Indian Education Commission (1964-66):
The Indian government realized the necessity of a national educational policy in post-independence. Kothari Commission (1964-66) proposed uniform curriculum with scientific and technical education, eliminating disparities in regional differences. The 1986 National Policy on Education focused on equity and quality.

Liberalization and Technological Education: (1990s to Date)
The economic liberalization of the 1990s was another turning point in the evolution of Indian education. There was a growing emphasis on vocational and technical education and institutions such as the IITs and IIMs became internationally recognized for their academic rigor.

Right to Education Act (2009)
The Right to Education Act was enacted in India in 2009. Education is now recognized as the right of every child between 6 and 14 years of age. The aim is to provide free and compulsory education to all children irrespective of their socio-economic status.

6. Challenges and Reforms
Despite all this, there remain several challenges in front of Indian education systems. In the Indian scenario, these are: Unequal access, urban- rural gaps in quality, teaching learning process that relies majorly on rote and an outdated curriculum, education which is mismatched against job requirements.

The NEP 2020 is the government's initiative, through which it bridges the gap between multidisciplinary education and increased critical thinking, integrated technology, and access to quality education in all sections of society.

Conclusion

Indian education evolved from its ancient roots in the Vedic gurukulas into a complex, modern system, meeting the requirements of a rapidly changing society. The journey of education in India is still moving, and the system has to move forward to address the challenges of the 21st century with inclusiveness, equity, and quality.

Understanding the Indian Knowledge System (IKS)

The Indian Knowledge System is known for its holistic, interdisciplinary and sustainable fundamental feature. Unlike the fragmented, subject- specific approach of modern education, IKS promotes a synthesis of knowledge that considers human well-being, ethics, and the environment as interrelated entities. Key elements of IKS include:

1. Philosophy and Ethics: Based on texts such as the Upanishads, Bhagavad Gita, and Jain and Buddhist traditions, IKS fosters ethical behavior, self-knowledge, and the development of compassion.

2. Health and Well-being: The Ayurvedic system of medicine also stresses preventive medicine, lifestyle modification natural treatment. This is also very useful in current health emergencies, such as psychiatric disorders, or chronic diseases associated with lifestyle.

3. Mathematics and Science: Mathematical evolution (e.g., zero, algebra and trigonometry) of India and astronomical achievements (e.g., heliocentric theories by Aryabhata) of India laid the foundation of modern scientific advancement.

4. Environment and Sustainability: Mainstream agricultural activities such as organic farming, biodiversity conservation, and water management play crucial role in reaching the objectives of sustainable development.

5. Education and Pedagogy: The historical gurukula system--pedagogically based on experiential learning, mentoring and moral development-- can provide clues on how to make education more learner-centered today.

There are some of the issues of IKS that are up to date, particularly for the solution to the problems of globalization, environmentalization, mental health, and educational disparities.

Relevance of Ancient Practices to Contemporary Problems

The world today faces multifaceted challenges such as climate change, mental health crises, loss of biodiversity, and social inequality. IKS, by its tenets of sustainability, health, and ethical living, has potential to provide solutions to these problems.

1. Climate Change and Environmental Degradation
   ❖ Relevance of IKS: Eco-friendly rainwater harvesting (stepwells, johads) and organic farming, which are traditional Indian practices, have sustainable benefits. The idea of 'Vasudhaiva Kutumbakam' (the world as a family) is a justification for shared environmental responsibility.

❖ Contemporary Relevance: Water conservation technologies, soil fertility management approaches, and practices of organic agriculture are again being put into practice in current day environmental sustainability initiatives. Indigenous traditional knowledge for forest preservation and biodiversity conservation is in harmony with the Sustainable Development Goals (SDGs) of United Nations.

2. Mental Health and Well-being

❖ Relevance of IKS: The theory of mindfulness and mental health is strongly rooted in yoga, meditation, and Ayurveda. E.g., texts citing Patanjali Yoga Sutras that highlight the state of equilibrium between body, mind and spirit.

❖ Contemporary Relevance: Mental health disorders (e.g., anxiety and depression) have increased worldwide. Implementing yoga, meditation, and mindfulness interventions in current medicine and education can offer nonpharmacological behavioral interventions for mental health. Programs such as the International Day of Yoga highlight the worldwide acceptance of yoga practices.

3. Educational Equity and Holistic Development

❖ Relevance of IKS: The gurukula system encouraged creative learning, personal development, and the learning of ethics, values and life skills. Education was experiential, emphasizing practical learning through nature.

❖ Contemporary Relevance: NEP 2020 builds upon the gurukula model through its emphasis on experiential and integrated learning. With the focus on multidisciplinary learning and value-based learning, the goal is to cultivate socially responsible individuals. Skill development and self- sufficiency, which are core to traditional education, are being highlighted through programs such as Atmanirbhar Bharat (Self-Reliant India).

4. Healthcare and Public Health

❖ Relevance of IKS: Ayurveda focuses on preventive healthcare, nutrition, and lifestyle changes. Concepts like dinacharya (daily routine) and ritucharya (seasonal routine) emphasize maintaining balance for health.

❖ Contemporary Relevance: Modern healthcare faces a crisis of rising lifestyle diseases. The COVID-19 pandemic emphasized the role of immunity, prevention, and natural therapies. Since then, the Ministry of AYUSH has shown support for Ayurveda, Unani, Siddha and homeopathy both as therapeutic and public health measures.

Solutions to Overcome Challenges in IKS Integration
Although IKS has a lot to show, incorporating it into modern learning, policy, and health is fraught with a number of challenges. Key challenges and their solutions are outlined below:

1. Challenge: Lack of Awareness and Documentation
Solution: Documenting traditional knowledge, digitizing manuscripts, and creating comprehensive knowledge repositories through bodies like the Ministry of AYUSH and the National Mission on Manuscripts. Academic institutions should offer IKS courses to foster greater awareness.

2. Challenge: Fragmented Education System
- Solution: NEP 2020 emphasizes a multidisciplinary approach, drawing on India's traditional knowledge. This can be achieved by curriculum modifications, teacher training and by introducing topics like yoga, meditation, and the value education at school level.

3. Challenge: Resistance to Change
- Solution: Sensitizing the stakeholders (teachers and parents) for the importance of IKS by way of workshops, seminars and success stories. Showcasing how IKS aligns with global frameworks like the SDGs can increase acceptance.

4. Challenge: Insufficient Research and Validation
- Solution: Funding research on IKS, working with international research institutions, and involving evidence based approaches in validating IKS practices. This may be accomplished by dedicated IKS research facilities in academic institutions.

"Education is the most powerful weapon which you can use to change the world "

Relevance of Key Education Commissions and Policies
The significance of IKS in contemporary education has been recognized by various commissions and education policies.

1. Kothari Commission (1964-66)
Kothari Commission placed paramount importance on giving place to culture values and ethics in education, which corresponds to IKS principles. Its endorsement of "work experience" as part of the learning experience is in accord with the experiential model underlying the gurukula system.

2. Sarvepalli Radhakrishnan Commission (1948-49)
Dr. Radhakrishnan stressed the importance of philosophy and ethics in the university system. His call for human-centered learning is in tune with the IKS-model of moral and ethical learning. He noted that education can (should) lead to morally upright and responsible citizens.

3. Right to Education Act (2009)
Under the RTE Act, equity of education is also taught for all the children. IKS, by virtue of its holistic approach to education and experiential learning, contributes to the goal of inclusive education. Such action can be enhanced by bringing in indigenous knowledge and models based on the local context-oriented education.

4. National Education Policy (NEP) 2020
NEP 2020 is a policy of great significance as it is very close to IKS principles. It promotes multidisciplinary education, experiential learning, and value-based education. The policy emphasizes the need to integrate IKS into the curriculum, revive classical languages, and promote holistic education, similar to the gurukula model.

Conclusion

The Indian Knowledge System (IKS) offers timeless insights for addressing contemporary challenges like climate change, mental health, healthcare, and educational inequity. Grounded in ethics, sustainability, and embedded well-being, IKS is still of current importance. The Kothari Commission, Dr. Radhakrishnan's Commission, the RTE Act and the NEP 2020 have all recognized the importance of cultural knowledge systems in education.

In order to fully capitalise on the strengths of IKS, it is important to address obstacles including change resistance, problems with recording, and requirements for research confirmation. Through the integration of IKS in education, healthcare, and in environmental policy, India can develop a knowledge framework, which is holistic, ethical, and sustainable, guaranteeing a brighter future for all.

Ancient knowledge of India is not merely a historical curiosity, but a roadmap for the future. By way of educational reform, community involvement and policy backing, it can be a powerful engine for driving 21st-challenges solutions.

Atlast Those who have knowledge, don't predict, those who predicts don't have the knowledge.

Thankyou

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Indian Knowledge Systems: Relevance of Ancient Practices for Contemporary Problems

Shriya V Hegde

SWARNA BHARAT

Introduction: Our India primarily is known for its diversity and rich heritage. When we see a beautiful tree we tend to looks at its fruits and flowers and take a look at its beauty, in the same way when we talk about our beautiful country India we tend to think and look at its diversity in nature, culture, tradition and people. But no one tends to think about the person who has taken care of that tree with love for it to grow so beautiful, similarly the reason for India's rich heritage and progress is not only a single person who has taken care of it, but many people whose thoughts and actions that has led India to grow into such a beautiful nation.

Roots of the Tree: No tree can grow without roots and no country can have a bright future without knowing the history. India's history is nothing less than a dramatic play, it consists of pride, victory, development, glory but also slavery, being colonised, disrespected and mocked. Every once in a while now we hear Indians taking over the higher posts in foreign countries that gives us a feeling of proudness, not only us mortal ones but also the souls of freedom fighters who have fought for this country's independence by sacrificing their blood. Their blood has become the soil for this nation to grow. Hence when we talk about the Independent India we always mention our freedom fighters because a sapling cannot grow into a tree without proper soil. Now when there is a delicious fruit on a tree there are some greedy kids who tend to steal it. Similarly our India always owned a delicious fruit that many countries tried to steal. A delicious fruit won't just pop out of tree, it takes efforts and skills to make it grow. In the same way the delicious fruit that India always bore was never an effort of a single person. The greedy kids always tried to steal the fruit but never learnt what it takes to grow the fruit. So they always tried some new ways to steal it, but never could. The farmer or the person who owned the fruit never tried to eat it or sell it. Once he died the next generation never valued the fruit as it was always bright and always with them. One after other generation no one valued it any more, except those greedy kids. As the people who owned it never cared about it anymore, similarly when our own Indians forgot their rich culture, skill and those traditions the fruit started to fade away as if it never existed.

The Present: In our daily life we go through so many problems, so many conflicts with others, we don't even have time to spend with our family. In this busy schedule we have just become some kind of emotionless robot who only know to work and take stress of work. Sometimes I do wonder where did we lose ourselves in this fast running world, our culture that reflects in our behaviour makes us who we truly are. We often just blame stuffs on our fate but isn't that fate present right in our palms. I am sure of it, if our ancestors blamed everything on fate and did not work hard the sapling of our nation wouldn't even have grown into a tree. The efforts they took, their mentality and capability should be taken as an ideal thinking today.

Ideal thinking: Our ancestors considered the nature elements as gods and always worshipped and valued them. But today we just don't care whether it is polluted or there is scarcity of it, unless they are available to us everything is just normal when there is no availability to us we starting protesting, questioning the government and do so much stuff. But when we have it we don't value it we just neglect it, so why do these protesting and demanding. When we

don't value them why should they. We should be grateful to be born as Indians where our ancestors valued nature, gave her a place of mother. We should still treat her as our mother because she is the one who actually takes care of our family. She bears so much burden but still smiles as the bright sun and the calm wind. Have we become so busy that we can't thank or protect the one who actually is the reason for our survival. I don't think our ancestors thought like that, they didn't have that much education like us but still were still practicing rain water harvesting, organic farming and crop rotation that can resolve our modern problems like water scarcity, soil degradation, and sustainable agriculture.

We usually observe our grandparents having so many children like a dozen of them but now we see a family having only a single child, whose chances of survival just as a baby is so low. Why is it like that, not only because of air pollution but also genetics. We have become physically so weak that a mother who is pregnant can either save her life or the child's. Our ancestors never had to choose or pick like this because they used to do regular exercise, not like how we go to gym. The regular house hold chores that were more effective in maintaining their health, they used to have a balanced diet even before they knew the meaning of it. We should bring these practices in our daily life doing yoga and household chores will prevent many deadly diseases that leads to death.

When we hear the word ethics and governance the thing that comes to our mind is Bhagvad Gita, Shrimad Ramayana and Mahabhartha, that provides us timeless principles for ethical leadership and decision-making, which are still relevant in politics and corporate governance. We should inculcate such principles in our life just like our ancestors did. If freedom fighters gave us liberty to feel the soil these gave us the light, the lights that helps us grow and gives us hope.

We all have heard about how the brave and talented kings who built so many monuments, temples and vehicles etc. Sometimes we do wonder how did they build something like this without engineering course, the modern tools, JCB, cement and many more, like were they born with silver screws instead of spoons. That's how we think, but the truth is only honesty and the urge or mentality to give your best in whatever we do, to put our culture and tradition first matters the most which we lack now. We always think inside the box and our ancestors thought how do I convert this box into a masterpiece with my talent. Nothing can be achieved without having faith and without ultimate concentration. So how did our ancestors achieve this, like from where did they get it. They got it from doing dhyana, meditation, worshipping gods and nature, worshipping the work they do. That's what we need to inculcate in our life so that this fast running world will slow down for a while because it not the world running its us, our mind that's running in search for peace that is within us.

Watering the Sapling: We tell our kids that they are the future of our nation and that they have to lead this country. But are we watering this sapling properly, are we providing this sapling the proper amount of nutrition that it needs, because if we are expecting our children to grow into a strong tree bearing flowers and fruits we should provide it all the nutrition it needs. We should teach our children how our ancestors respected their elders, nature and every living thing. Providing modern education is important but only providing water to the sapling and not sunlight, the sapling or plant won't grow. Similarly providing only modern education will not help the child, modern education with cultural and spiritual knowledge is how the child can grow from a sapling into a strong tree that is capable of providing shelter to others. It can be an inspiration to the young growing saplings and also act as a guide for the people who want their sapling to grow into a strong tree.

The plant stage: A sapling does not grow directly into a tree, it tree grows from a plant. At that time it needs the most attention. In the same way our country is right now a developing country and this is when it needs the most attention from its people, because a country is made from its people. Our India was a country bearing many fruits but because of some greedy kids and ignorant people the fruits and tree gradually turned into a sapling. Now it is our responsibility to make this sapling back into a tree bearing many unique fruits of its own. The Gurukul system which was first started in our country is being adapted by all other countries except our own country. The greedy kids who could not steal the fruit are now trying to grow the fruit. We should bring back the gurukul system where students graduate becoming an all-rounder and they do not have to take any extra course or go to abroad. We should provide our future generation the quality and cultural education that they deserve, that our ancestors left for us. We should make our country an ideal country, a developed and progressed country that our ancestors would be proud off.

Seasons of agriculture: The seasons keep changing that affects the people and the plants. But seasons come and go, but we always learn something from it. Similarly difficulties have come so many times on our nation before but our ancestors have always come up with a way to handle it. Our nation is an agriculture based nation, so our economy totally depends on the agriculture. Unpredictable Weather like warmer climates have led to the spread of new pests and diseases. Continuous use of chemical inputs has reduced soil fertility and harmed beneficial organisms. Deforestation and poor farming practices lead to topsoil loss, reducing arable land. Improper irrigation methods cause salt build up in the soil, making it unproductive. Farmers often face unpredictable crop prices, leading to income instability. Technology adoption remains uneven, with rural areas lagging behind. Growing the same crops repeatedly reduces genetic diversity and increases vulnerability to pests and diseases. In ancient India, agriculture was a cornerstone of the economy and way of life. The methods used were deeply rooted in the natural cycles and rich knowledge passed down through generations. Wells were dug to access groundwater, rivers like the Ganga and Godavari were tapped using canal systems. Tanks and Reservoirs were constructed to store rainwater for use during dry periods. The plough was the primary tool for tilling soil and the bulls were often used to pull them. Implements like sickles and hoes were crafted from locally available materials. In modern days we use chemical fertilizers for the growth of plant, but without proper knowledge if used they may be harmful. Earlier cow dung and plant waste were commonly used as fertilizers that did not harm the plant because they were natural. Farmers practiced rotating crops to maintain soil fertility and reduce pests. Farmers were highly attuned to weather patterns and relied on the monsoons for water. They planted crops like rice, wheat, barley, and millet according to the seasons. Bullocks and Oxen animals were integral, not only for ploughing but also for transporting produce and water. Farmers cultivated diverse crops, including grains, legumes, vegetables, and spices, ensuring a balanced diet and ecological harmony. Agriculture often involved collective efforts, with villages working together during planting and harvest seasons. Festivals celebrated the completion of agricultural cycles, such as Pongal and Makar Sankranti. This sustainable and holistic approach ensured long-term productivity and a deep connection with nature.

These kind of practices should be brought in now to make our developing country into a fully developed country in all ways. All round support should be provided to the progressive ideas so that they can be put into action. These actions look small at first but small steps leads to big actions.

Conclusion: They say modern problems require modern solutions, but sometimes modern solutions require modern aspects with cultural and spiritual knowledge like how nutrition, soil, sun and water is required for a plant to grow into a tree. Our nation is just like a growing toddler. The new parents won't know what to do when the child is crying or is acting wired sometimes that time they take the advice of their parents as they have a lot of experience which could be useful for them in growing their child. Similarly, the actions of our ancestors or the principles that they followed in their life which are available to us in the written form of stories like Ramayana and in the form of Shlokas like Vedas and Upanishads that are more than enough for our mortal world. Our ancestors used to clean the house every day because they believed that the god may visit them anytime in any way, it could be an animal or a human so they used to respect everyone. The way they kept their environment clean, and the social values that they taught their kids are nothing more than the golden words itself. They say that old is gold maybe it's true if we bring back our old rich heritage we may again make our country a strong nation bearing a tons of fruits for everyone to eat and share as the fruits and flowers keep growing as the season changes. We must bring back those agricultural practices and that respect that the farmers used to get. Nowadays no one respects the farmer because they look poor and they're hands and clothes are generally covered in mud, but those people are the reason why we, our children are stomach full. They keep their stomach empty so that they can fill ours. They are no less than gods to us, so they deserve respect and support more than anyone. The nationalism and patriotism our ancestors bore towards their nation is totally lost in our busy lives. We should be thankful to our country and its people for everything that we have got because we were born in this country and after our death, our ashes flow in its river. These rivers are considered to be holy rivers like Ganga, Yamuna, Cauvery, Godaveri, Narmada, Sindhu and many more. These rivers are always worshipped because they are the sign of purity and known for giving forgiveness of sins. They are considered as mothers and have capacity to cleanse the doings of mankind. From birth to death we are always connected to our ancestors, no matter wherever we go, we carry the spirit of India within us and we bear the capability right in our hands to create "**THE SWARNA BHARAT**".

Indian Knowledge System:
Relevance of Ancient Practices for Contemporary Problems

Parmar Swati Muljibhai

Indian knowledge systems encompass a complex and profound array of disciplines, philosophies, and methodologies that reflect the rich cultural heritage of India. This essay will discuss the various dimensions of Indian knowledge systems, including their historical significance, key contributors, and the wide-ranging impact on contemporary society. Furthermore, the essay will examine recent developments in the field and explore future challenges and opportunities for the preservation and evolution of these systems. Indian knowledge systems are not monolithic but rather an amalgamation of diverse elements such as philosophy, science, literature, art, and practice-based knowledge. These systems have evolved through centuries, influenced by an interplay of indigenous thoughts and external interactions. The essence of these systems is deeply rooted in ancient texts, oral traditions, and empirical methodologies that emphasize observation, experience, and spirituality. Historically, the Vedic texts are among the earliest sources of knowledge that encapsulated various domains such as cosmology, mathematics, medicine, and ritual practices. The Upanishads and Puranas contributed significantly to philosophical discourse and ethical frameworks. The contributions of key thinkers like Adi Shankaracharya in the field of philosophy and Aryabhata in mathematics laid foundational stones for critical thinking that permeates Indian education. The influence of scholars like Charaka and Sushruta in the field of medicine cannot be overlooked. Charaka's foundational work, the Charaka Samhita, continues to influence Ayurvedic practices today. Similarly, Sushruta's contributions to surgery are recognized worldwide. These historical figures not only cultivated knowledge in their respective fields but also emphasized a holistic understanding of human health, which was interlinked with environmental and societal factors. As societies evolve, so do knowledge systems. In recent years, there has been a resurgence of interest in indigenous knowledge systems, particularly in the context of environmental sustainability and traditional medicine. The recognition of Ayurveda and Yoga as holistic practices is not merely a revival but an integration of ancient wisdom into modern health paradigms. The World Health Organization has also acknowledged the need to incorporate traditional systems for promoting health and well-being globally. The Indian government has sought to promote and revitalize these knowledge systems through various initiatives. The establishment of the Ministry of Ayush serves as a crucial step in institutionalizing traditional medicine and promoting research and education. Moreover, the introduction of programs to integrate Indian knowledge systems into the educational curriculum aims to instil pride in cultural heritage while enhancing global relevance. Influential individuals in contemporary times, such as Dr. V. Ramachandran and Dr. Vandana Shiva, have pushed for recognition and integration of indigenous knowledge systems in addressing modern challenges. Dr. Ramachandran's work in neuroscience has led to significant insights into the understanding of the brain, while Dr. Shiva has advocated for biodiversity and sustainable agricultural practices rooted in traditional knowledge. Their contributions illustrate the versatility and applicability of Indian knowledge systems in addressing pressing global issues. The perspectives on Indian knowledge systems also highlight the contrasts between ancient wisdom and contemporary scientific approaches. Critics argue that certain beliefs within traditional systems may conflict with modern scientific methodologies. However, proponents

emphasize the complementary nature of these systems, arguing that wisdom derived from centuries of observation and practice can contribute to sustainable solutions for modern challenges. The role of technology in preserving and promoting Indian knowledge systems is another significant aspect. Digital platforms provide an avenue for documenting ancient texts, sharing practices, and facilitating access to knowledge that was once limited to oral traditions. Online courses and webinars on subjects such as yoga, Ayurveda, and classical arts make these knowledge systems more accessible to a global audience. As we look to the future, there are both opportunities and challenges in the realm of Indian knowledge systems. The globalization of education and culture presents an opportunity for these systems to gain greater visibility and relevance on the world stage. However, challenges remain, particularly in the context of commercialization and the potential dilution of traditional practices. Future developments may focus on the integration of technology with traditional methods to create hybrid systems that sustain the essence of Indian knowledge while innovating for contemporary needs. As interdisciplinary approaches gain prominence, the fusion of traditional wisdom with advancements in science and technology could pave the way for novel solutions that address ecological, health, and social challenges. Indian Knowledge Systems: A Tapestry of Wisdom and Innovation India's rich cultural heritage is deeply intertwined with its vast repository of knowledge systems, which span diverse fields such as philosophy, science, mathematics, medicine, arts, and spirituality. These systems are not merely historical artifacts but living traditions that have shaped the intellectual, cultural, and spiritual landscape of the world. Rooted in ancient texts, oral traditions, and practical applications, Indian knowledge systems reflect an integrative approach to understanding life and the universe. This essay delves into the core aspects of Indian knowledge systems, their historical significance, their contemporary relevance, and the challenges in preserving and integrating them into modern frameworks Historical Foundations of Indian Knowledge Systems the Indian subcontinent has been a cradle of knowledge for millennia. The earliest records of systematic thought can be traced back to the Vedas (1500–500 BCE), which encompass spiritual insights, cosmology, and rituals. The Upanishads, as extensions of the Vedas, introduced profound philosophical inquiries into the nature of existence, consciousness, and the ultimate reality, Brahman. Simultaneously, disciplines such as mathematics and astronomy flourished. The Sulbasutras, ancient texts on geometry, reveal sophisticated knowledge of constructing altars, indicating an early understanding of mathematical principles. Scholars like Aryabhata and Brahmagupta laid the foundation for algebra, trigonometry, and the concept of zero, revolutionizing global mathematics. The Panchangam (Hindu calendar) exemplifies the integration of astronomy and daily life. In medicine, the Ayurvedic tradition emerged from texts like the Charaka Samhita and Sushruta Samhita, which presented comprehensive systems of diagnosis, surgery, and herbal treatments. These works highlight an integrative approach to health, emphasizing balance and holistic well-being. The development of Sanskrit grammar by Panini, considered one of the most sophisticated linguistic frameworks in the world, underscores India's contributions to linguistics and communication. Panini's Ashtadhyayi is a testament to the precision and analytical rigor of Indian Thought Core Principles of Indian Knowledge Systems

1. Holistic Approach Indian knowledge systems view the universe as an interconnected whole. Fields like Ayurveda, yoga, and Indian philosophy emphasize harmony between body, mind, and spirit. This integrative perspective extends to the environment, society, and cosmic order.

2. Practical and Experiential Basis Unlike purely theoretical frameworks, Indian knowledge systems prioritize practical application and experiential understanding. For instance, yoga is not merely a philosophy but a disciplined practice that enhances physical and mental well-being.
3. Interdisciplinary Nature Indian traditions blur the boundaries between disciplines. Astronomy and astrology, medicine and spirituality, art and mathematics often overlap, reflecting a unified approach to knowledge.

4. Focus on Sustainability and Ethics Ancient Indian texts emphasize sustainable living and ethical principles, as seen in concepts like Ahimsa (non-violence), Dharma (righteous duty), and Rta (cosmic order). These ideas remain relevant in addressing contemporary issues like environmental degradation and social inequality. Contributions to Science and Technology Indian knowledge systems have significantly influenced global science and technology. Mathematics and Astronomy: The decimal system, the concept of zero, and advancements in trigonometry were revolutionary contributions. Aryabhata's heliocentric model and precise calculations of planetary motion predated Copernicus by centuries. Medicine: Ayurveda's emphasis on preventive care and natural remedies has gained global recognition. Surgical techniques described by Sushruta, including cataract surgery, were pioneering. Metallurgy: The Iron Pillar of Delhi, resistant to corrosion for over 1,600 years, exemplifies advanced metallurgical knowledge. Philosophy and Spirituality Indian philosophy offers diverse schools of thought, from the dualistic Samkhya and Nyaya to the non-dualistic Advaita Vedanta. These systems explore questions of existence, ethics, and liberation. The teachings of Jainism and Buddhism, originating in India, emphasize compassion, nonattachment, and the path to enlightenment. The spiritual practices of yoga and meditation, rooted in Indian traditions, have become global phenomena. They provide tools for self-realization and stress management, resonating with contemporary needs. Art, Literature, and Aesthetics Indian art and literature reflect the richness of its knowledge systems. Classical Literature: Epics like the Mahabharata and Ramayana are not only literary masterpieces but also repositories of moral and philosophical teachings. Aesthetics: The concept of Rasa (emotional essence) in Indian art and literature illustrates a sophisticated understanding of human emotions and their expression. Architecture: The construction of temples, such as those in Khajuraho and Hampi, showcases advanced engineering and aesthetic principles Contemporary Relevance of Indian Knowledge Systems in an era of globalization and rapid technological advancement, Indian knowledge systems offer valuable insights for sustainable and holistic development.

1. Healthcare: Ayurveda and yoga have gained prominence as complementary therapies. They align with the growing demand for preventive and natural healthcare solutions.
2. Education: Integrating traditional knowledge with modern education can foster critical thinking, creativity, and ethical awareness. The NEP 2020 emphasizes the inclusion of Indian knowledge systems in curricula.
3. Environmental Sustainability: Ancient practices like water conservation, organic farming, and reverence for nature provide blueprints for addressing environmental challenges.
4. Philosophy and Ethics: Indian philosophical concepts like interconnectedness and non-violence are relevant in promoting global peace and cooperation. Challenges in Preserving Indian Knowledge Systems Despite their richness, Indian knowledge systems face several challenges:

1. Colonial Legacy: The colonial education system devalued traditional knowledge, leading to its marginalization.
2. Fragmentation: The oral transmission of knowledge and lack of systematic documentation have resulted in the loss of many traditions.
3. Modern Skepticism: The dominance of Western paradigms often leads to the dismissal of traditional knowledge as unscientific or outdated.
4. Commercialization: The global popularity of practices like yoga has sometimes led to their commodification, diluting their essence. Reviving and Integrating Indian Knowledge Systems To ensure the relevance and survival of Indian knowledge systems, several steps are necessary:
   1. Documentation and Research: Systematic documentation and scientific validation of traditional practices can bridge the gap between ancient wisdom and modern science.
   2. Educational Reforms: Incorporating Indian knowledge systems into mainstream education can foster a sense of pride and awareness among younger generations.
   3. Policy Support: Government initiatives to promote research, preserve manuscripts, and support practitioners are crucial.
   4. Global Collaboration: Sharing Indian knowledge systems with the world through cultural exchanges, research collaborations, and public diplomacy can enhance their global appreciate A Tapestry of Wisdom: Unveiling the Indian Knowledge System India, a land steeped in ancient wisdom and profound thought, has nurtured a rich tapestry of knowledge systems that have shaped civilizations and continue to inspire minds across the globe. From the celestial observations of Vedic astronomers to the intricate medical treatises of Ayurveda, the Indian knowledge systems encompass a vast spectrum of disciplines, offering unique perspectives on the universe, the human condition, and the interconnectedness of all beings. This essay delves into the multifaceted nature of these systems, exploring their historical significance, philosophical underpinnings, and contemporary relevance. The Pillars of Indian Knowledge Systems At the heart of Indian knowledge systems lies a holistic approach that seeks to integrate the physical, mental, and spiritual dimensions of human existence. This approach is evident in the various disciplines that have flourished over millennia, including:

- Vedas and Upanishads: The foundation of Indian philosophy and spirituality, the Vedas and Upanishads offer profound insights into the nature of reality, the self, and the cosmos. They explore concepts such as Brahman (the ultimate reality), Atman (the individual soul), and Karma (the law of cause and effect), providing a framework for ethical living and spiritual liberation.
- Yoga: A system of physical, mental, and spiritual practices aimed at achieving union with the divine. Yoga encompasses various disciplines, including Ashtanga Yoga, which outlines eight limbs of practice, and Raja Yoga, which emphasizes meditation and mental discipline.
- Ayurveda: The traditional Indian system of medicine, Ayurveda emphasizes the holistic well-being of the individual, considering the interplay of mind, body, and spirit. It employs a wide range of therapies, including herbal remedies, dietary guidelines, and lifestyle practices, to promote health and prevent disease.
- Jyotisha: The Indian system of astrology, Jyotisha is based on the belief that celestial bodies influence human lives. It involves the study of planetary positions and their impact on various aspects of life, including personality, relationships, and career.
- Vastu Shastra: The ancient Indian science of architecture, Vastu Shastra emphasizes the harmonious integration of human dwellings with the natural

environment. It considers the flow of energy, the orientation of structures, and the placement of elements to create spaces that promote well-being and prosperity. The Interconnectedness of Knowledge Systems. The Indian knowledge systems are not isolated disciplines but are interconnected and mutually reinforcing. For example, Ayurvedic principles are often integrated into yoga practices, while Jyotisha insights can inform Vastu Shastra design. This interconnectedness reflects the holistic worldview that underlies Indian thought, which emphasizes the unity of all beings and the interconnectedness of the universe. The Enduring Legacy of Indian Knowledge Systems the Indian knowledge systems have had a profound impact on human civilization, influencing fields as diverse as mathematics, medicine, astronomy, and philosophy. The concept of zero, the decimal system, and the Pythagorean theorem are all believed to have originated in India. Indian medical practices, such as Ayurveda and Siddha, have contributed significantly to the development of modern medicine. The principles of non-violence (ahimsa) and universal brotherhood (vasudhaiva kutumbakam) have inspired social and political movements worldwide. Contemporary Relevance of Indian Knowledge Systems In an era of rapid technological advancement and environmental challenges, the Indian knowledge systems offer valuable insights and solutions. The emphasis on sustainability, holistic well-being, and spiritual growth resonates with contemporary concerns. Practices such as yoga and meditation have gained widespread popularity for their stress-relieving and mind-calming benefits. Ayurvedic principles are increasingly being integrated into modern healthcare practices. The principles of nonviolence and universal brotherhood continue to inspire movements for peace and social justice. Challenges and Opportunities While the Indian knowledge systems offer valuable insights and solutions, they also face challenges in the contemporary world. The rapid pace of technological change, the globalization of culture, and the dominance of Western scientific paradigms can pose threats to the preservation and transmission of these traditions. However, these challenges also present opportunities for innovation and cross-fertilization. The integration of traditional knowledge with modern scientific methods can lead to new discoveries and breakthroughs in various fields.

Conclusion

Indian knowledge systems represent a treasure trove of wisdom that transcends time and geography. Their holistic, interdisciplinary and ethical approach offers solution to many contemporary challenges from healthcare and education to environmental sustainability and global harmony. By reviving and integrating these systems into only preserve its heritage but also contribute to the well – being of humanity. The journey of rediscovering and remaining Indian knowledge systems is a testament to their enduring relevance and transformative potential.

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Relevance of Ancient practices for contemporary problems

Malkari Lahari

Practicing Yoga for mental health to Choosing traditional methods of Agriculture Our present is becoming more reliable on our Ancient Practices. India being a pluralistic country with huge diversity, ethnic differences it has its past driven by Ancient Mediaeval and Modern Phases of Living. Be it Industrialization or Urbanization, they have transformed the living style of people. There have been changed took place in culture, ways of life, norms and values, fashion and even body language. Be it Ancient, Mediaeval or Modern the development can be categorized into Three Parts viz Social, Political and Economical. India after being colonized by British for almost 2 years she is evolving as one of the emerging power on global stage. Indian people have their own style of living which are rooted to culture and Traditions. India is home to 8000 medicinal plants, Rich wild life and it has hundreds of Languages and dialects. The Ancient practices of India be it Agriculture (economy) or Health are relevant even today and routing solutions for the contemporary problems. The question here is How are those practices which were neglected are again gaining their importance in the contemporary world and For what problems we are rooting to our Ancient practices? Let's understand how Ancient practices are relevant for the contemporary problems. The contemporary world is running behind the Advanced technologies with Advanced Infrastructure. The 20 and 21st century marks its innovation with the Artificial intelligence which is an absolute game changer. In the era of Technology and development. As we grow towards the modernization the traditional practices of our ancient times are being overshadowed. But Today India is on the lime light for its exceptional Ancient practices by the rest of the world which also includes great infrastructure and advanced technology.

1.Ayurveda: Ayurveda which is also understood as nature based medicine was originated in India 3000-5000 years ago. Ayurveda is the oldest tradition method of medicine which was accepted worldwide. Ayurveda doctrine believes that the entire universe is composed of five elements; Vayu (Air), Jala (Water), Aaka (Space or ether), Prithvi (Earth) and Teja (Fire). Ayurveda is not just only about natural medicines. It is beyond that involves the way of living, practicing yoga and meditation and much more that focus on mental health as well. In the contemporary world even though the realm of medicine has advanced with Infrastructure with great technology the base for some of the treatments are based on ayurveda. Medical Conditions related to fertility, Breast Cancer, Respiratory Related problems, Arthritis, Asthma and many more are being treated by the ayurvedic treatment. Ayurveda offers a rich, ancient heritage that can help solve ma of the issues affecting contemporary society as more and more individuals turn to complementary therapies in addition to mainstream medicine. We can develop a more sustainable and well-rounded approach to health and well-being by fusing modern medical procedures with Ayurvedic principles.

2.Yoga Being fit, not only physically but mentally is the new age Heal goal. Attaining Mental health in this busy day to day life h become a concern. In a time when urbanization, technology, and fast change have drastically changed our lives, people now face a variety of modern problems, including stress, mental health disorders, long-term physical illnesses, and a deep sense of alienation from oneself and the outside world. In light of these problems, yoga, an age-old Indian discipline, has become a potent instrument for advancing overall health and

wellbeing. Yoga's value today extends well beyond its physical postures; it provides mental, emotional, and spiritual advantages that help with today's most pressing issues. The yoga diaspora began well over a hundred years ago and we continue to see new manifestations and uses of Yoga in the modern times. In today's society, mental health conditions like depression, anxiety, and burnout have become more prevalent. Social media, work obligations, and personal demands all contribute to depression, loneliness, and feelings of inadequacy. To make matters wors mental health difficulties are often the cause of phy symptoms like fatigue, gastrointestinal issues, and sleep disturbances. Man might feel that practicing yoga is just stretching, but it can do much more for their body, from the way they feel, look and move. This fact itself speaks volumes about the popularity of Yoga in the modern day world. This event has united the world on a common platform. Along with yoga, meditation also plays important role in developing the inner self in our daily life; it can be extremely helpful in eliminating several physical as well as psychological problems. In summary we can say that Yoga, an Ancient practice holds immense relevance for the contemporary problems(Health).

3. Agriculture/Farming Agriculture has always been back bone of the country's Economics. Agriculture-Cultivation, Farming techniques, Production rate has evolved through the decades. The green revolution resulted in production of Hybrid verieties which were of great demand in the earliest Years. With growing farming techniques the usage of Pesticides have also been gradually increased which adversely effected the Soil fertility. One such practice which has been revolutionary in the realm of Agriculture is Organic farming.

4.Organic farming Organic farming is not just a method of production but a philosophy of sustainability that reduces the use of synthetic fertilizers, pesticides, and growth regulators, relying instead on natural processes. Due to what it believes advantages over conventionally cultivated alternatives, organic food is becoming more and more popular as people become more health conscious. Many people believe that organic produce is free of artificial chemicals, hormones, and antibiotics, which have be connected to a number of health problems, such as antibiotic resistance, hormone disruption, and cancer. Many people are choosing organic products due to worries about food safety and long-term health risks, even if the direct health benefits organic food are still up for debate. Organic farming has become a viable answer to today's agricultural problems in the face of global environmental catastrophes, climate change, and growing worries about food security and sustainability. Organic farming, which is distinguished by its emphasis on ecological balance and dependence on natural inputs, presents a viable substitute for conventional agriculture, which frequently relies on artificial fertilizers, pesticides, and genetically modified organisms (GMOs). This approach is not only about growing food, but also about actively engaging with nature, focusing on biodiversity conservation and environmental sustainability. Countries Like Australia, China, India, Kazakhstan have already started Organic farming. Not only Health and Economics, there are some social aspects which are indeed rooting solutions to our ancient practices.

5.Family Structure: The foundation of ancient Indian society was the concept of interconnectivity, according to which the welfare of the community and the well-being of the individual were bound together. Although it is dwindling in many metropolitan areas, India's traditional joint family system promoted close family relationships, support for one another, and shared obligations. The joint family structure is being examined as a model for promoting unity in society and emotional support in contrast to the increasingly individualistic desires in contemporary urban life, especially in an era characterized by social isolation and mental health problems. Despite various difficulties in the present era, the joint fam system is still very valuable in Indian society today. Elder care is made easier, financial stability is ensured, cultural

heritage preserved, and emotional assistance is given. The joint family structure is still a significant part of India's social fabric, provide a balance between tradition and modernity in the face of fast change, even though the nuclear family model may be more appropriate for some groups of people's changing requirements. Finding a balance that enables families to maintain the benefits the joint family structure while meeting contemporary demands is essential to maintaining its relevance as India continues to urbanize and modernize. All living and non-living objects, including plants, microbes, rocks, minerals, the five elements, animals, and birds, are considered be part of nature. Our predecessors used religion to relate this resource to people's everyday lives. It educates people that all living and nonliving things are interdependent, and that if one becomes extinct, the fertility, prosperity, and general well-being of all other creatures will be disrupted. In traditional reverence, we express our gratitude. By finding and integrating these age-old customs in contemporary living, India can provide significant answers to own issues as well as global ones. The lessons of India's ancient wisdom may hold the secrets to a more peaceful, sustainable, and spiritually satisfying future as we face the difficulties of twenty-first century. These practices, that vary from t ecological ideas found in Vedic writings to the mental health advantages of yoga and Ayurveda, not only assist the individual but also foster communal harmony and the welfare of the entire world. In conclusion, it can be stated that in order to effectively address the problems that humanity faces today, the ancient reservoir of knowledge that India possesses—which even Indians have mostly forgotten or lost—needs to be investigated with n perspectives, scientific rigor, and unwavering experiment abilities. It will be clear that a tremendous effort is needed, a we must be roused from the flimsy and soporific gospels promise us that humanity will somehow overcome its challenges and find a normal and contented way of living

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Relevance of Ancient Practices for Contemporary Problems

Smrithi.N

It is considered Hinduism originated here from the Vedas and Indian civilization is the oldest civilization in the world, where people still follow their old culture of humanity and care. Ancient India refers to the time period stretching from the foundations of human civilization, People of various religions in India have their own cultures and tradition. The vital components of the Indian culture are etiquette, civilized communication, rituals, beliefs, values, etc.

A variety of eras came and gone, but no one was so powerful to change the influence of our real culture. People of old generations pass their cultures and beliefs to the next generations. So, every Indian child here behaves well to others as he/she has already learned about culture from parents and grandparents. We can see culture here in everything like dance, fashion, artistry, music, behaviour, social norms, food, architecture, dressing sense, etc. India is a big melting pot with various beliefs and behaviours, giving birth to different cultures here.

Indian cuisine is known for its diverse range of Flavors and spices. Each region in India has its own unique style of cooking and distinct dishes.

Some of the Problems which persist from many yuga's are health Problems like indigestion, skin disease, lack of energy etc.

An ancient practice rooted in Ayurveda, has gained popularity in recent times for its potential health benefits. This holistic approach involves eating food on banana leaf and drinking water in copper bottle.

The humble tradition of eating food on banana leaves while sitting on the floor is observed by many households in South India. Consuming food on a banana leaf can positively impact digestion. The polyphenols found in banana leaves stimulate the production of digestive enzymes, aiding in better digestion and nutrient absorption. Eating on a banana leaf provides health benefits, ensures sustainability, and improves the overall dining experience.

Benefits of Eating on a Banana Leaf

✓ Banana leaves contain polyphenols, which are organic antioxidants also present in green tea. These polyphenols fight off all the body's free radicals and guard against illnesses. There is also a significant amount of polyphenol oxidase in banana leaves, an enzyme that can treat Parkinson's disease.

✓ The experience of eating from a banana leaf stimulates all the senses. When you eat from a banana leaf, you focus on your food and feel its texture. This increases the satisfaction and satiation you feel at the end of the meal.

✓ The banana leaf itself isn't edible. However, when you eat food from a clean banana leaf, some of its nutrients get infused into the food. These nutrients include phenols, flavonoids, and proanthocyanidins that exhibit natural antimicrobial and antioxidant properties. Additionally, banana leaves contain strange anti-bacterial characteristics that help digestion and can destroy bacteria in food.

✓ The natural wax coating on banana leaves has a mild flavour and wax covering that gives them a glossy appearance and imparts a mild flavour to the steaming food served. When hot food comes into contact with the coating, it melts slightly, thereby enriching the flavour of the food.

✓ In tropical and subtropical regions, banana leaves are used for cooking in various cuisines for wrapping, steaming, and serving food. Steamed foods are frequently made with banana leaves, allowing for zero-oil cooking. Food cooked on banana leaves absorbs the polyphenols, which are believed to protect against various lifestyle diseases.

✓ Banana leaves are biodegradable. All the used banana leaves are collected and sent to farmlands, where they can be used as compost. They don't need to be washed, so you don't add to water wastage and pollution. At the same time, unlike disposable plastic plates, they are not pollutants.

In terms of medicinal value, banana plants have been used orally or topically as remedies in folk medicine and some studies have demonstrated this medicinal potential. The leaves contain an enzyme called polyphenol oxidase that produces L-DOPA that counteracts the action of free radicals, used in the treatment for Parkinson's disease. Studies in animal models have also shown banana leaves are an excellent source of rutin, which modulates glucose homeostasis and is a good candidate for the development of anti-diabetic drugs.

Drinking water from copper

Drinking water in copper bottle is generally considered safe and can have several health benefits:

✓ Copper can kill harmful bacteria and viruses in water, making it a natural remedy for water-borne diseases like cholera, typhoid, and jaundice.

✓ Copper is an essential mineral that helps with many bodily functions, including:
  - Digestion: Copper can stimulate the gastrointestinal tract to help with digestion.
  - Immune system: Copper's antimicrobial properties may help boost the immune system.
  - Joint health: Copper helps form collagen, which is a key component of joints and connective tissues.
  - Skin health: Copper helps produce melanin, which is the pigment that gives skin, hair, and eyes their colour.
  - Brain efficiency: Copper helps cells communicate with each other, which can make the brain work more efficiently.
  - Thyroid gland: Copper is essential for the thyroid gland to function properly.
  - Weight loss: Copper may help the body metabolize fat more efficiently, which can help with weight loss.
  - Oral health: Copper's antibacterial properties can help reduce harmful bacteria in the mouth, which can prevent tooth decay, gum disease, and bad breath.

✓ Copper water is rich in antioxidants, which can help combat free radicals that contribute to the formation of tumours and the stimulation of cancer cells. The antimicrobial properties of copper may also play a role in reducing the risk of cancer by eliminating harmful bacteria that could lead to carcinogenic conditions. By incorporating copper-infused water into your daily routine, you may be taking a proactive step towards reducing your risk of developing certain types of cancer.

✓ Drinking water from a copper bottle is thought to help balance hypertension by lowering cholesterol and triglyceride levels. Copper's role in improving blood circulation and allowing blood vessels to dilate can also contribute to reducing blood pressure, thus preventing hypertension. If you are looking for a natural way to manage your blood pressure, drinking copper-infused water may be a simple and effective addition to your lifestyle.

✓ Copper is crucial for the proper functioning of the thyroid gland. A lack of copper can lead to thyroid inefficiencies, and drinking copper-infused water may help balance thyroid function by providing the necessary amounts of this essential mineral. By ensuring that your body has sufficient copper levels, you can support the health and optimal performance of your thyroid gland.

✓ Copper plays a vital role in preventing anaemia by promoting the absorption of iron, which is essential for the production of haemoglobin and red blood cells. By drinking water stored in a copper bottle, you can enhance your body's ability to transport oxygen efficiently, thus reducing the risk of developing anaemia.

This benefit is particularly important for individuals who are prone to iron deficiency anaemia or those following a vegetarian or vegan diet.

✓ The anti-inflammatory properties of copper make it an effective natural remedy for individuals suffering from arthritis and other joint-related conditions. When water is stored in a copper bottle, copper ions infuse into the water, which can help reduce inflammation and ease the pain associated with these ailments. By incorporating copper-infused water into your daily routine, you may experience relief from joint discomfort and improved mobility.

✓ Copper has been recognised for its remarkable antibacterial properties, capable of combating harmful bacteria such as Vibrio cholerae, Shigella flexneri, and Escherichia coli. By storing water in a copper bottle for an extended period, typically overnight or longer, you allow the copper to infuse into the water and exert its 'contact killing' effect. This process purifies the water, effectively negating the risk of infections caused by these pathogenic microorganisms.

✓ Drinking water stored in a copper bottle can promote digestive health by cleansing and detoxifying the stomach. Ancient Indian medical texts emphasise the benefits of copper-infused water in treating various stomach conditions, including ulcers and infections. The properties of copper help maintain a healthy digestive system, preventing issues such as constipation and acidity.

✓ The consumption of water stored in a copper bottle can contribute to the overall health of your cardiovascular system. Copper aids in clearing plaque from blood vessels, reducing the stress on the heart and improving blood flow throughout the body. By maintaining healthy blood vessels and cardiac muscles, copper-infused water supports cardiovascular well-being and helps prevent related complications.

✓ Copper possesses antioxidant properties that can help combat the visible signs of ageing. By neutralising free radicals in the body, which are responsible for causing skin damage and other age-related concerns, copper-infused water can contribute to a more youthful appearance. Regular consumption of water stored in a copper bottle may help reverse some of the effects of skin damage caused by sun exposure and environmental pollutants, promoting healthier, more radiant skin.

✓ Drinking water from a copper bottle may help to enhance your brain's efficiency. Copper plays a crucial role in the body's neurological functions, supporting the synthesis of neurotransmitters and maintaining healthy neural connections. By drinking water stored in a copper bottle, you may be able to improve your cognitive function and memory.

✓ Although the direct link between drinking water from a copper bottle and stroke prevention is not extensively proven, copper does play a role in overall heart health. It aids in the formation of new blood vessels and supports cardiovascular well-being, which could indirectly contribute to a reduced risk of stroke. While drinking water from a copper bottle alone may not prevent stroke, it can be part of a healthy lifestyle that supports heart health.

✓ The idea that drinking water from a copper bottle can aid in weight loss is more speculative than scientifically proven. While copper is essential for various bodily functions, including metabolism and energy production, there is no concrete evidence that copper-infused water directly impacts weight loss. Any potential weight loss benefits are more likely due to overall dietary and lifestyle changes rather than the specific use of a copper bottle.

✓ Copper's antimicrobial properties may help in wound healing by reducing bacterial infections. While the specific benefit of faster wound healing from drinking water stored in a copper bottle is not well documented, copper's role in connective tissue health and its anti-inflammatory properties might support the healing process.

✓ According to ancient Ayurvedic practices, drinking water from a copper bottle can help balance the body's acid levels and cool the body. The water stored in a copper bottle is said to become alkaline, which may help regulate body temperature, especially during hot weather. This cooling effect is believed to be beneficial for maintaining overall bodily balance.

✓ Copper has anti-inflammatory properties that could theoretically help in reducing inflammation in the throat. However, this benefit is more generally associated with copper's role in immune function rather than a direct effect of drinking copper-infused water. While drinking water from a copper bottle may not directly relieve throat congestion, staying hydrated is essential for maintaining overall health and well-being.

However, consuming too much copper can cause nausea, vomiting, diarrhoea, and stomach cramps. Some people like infants, children, and people with liver disease, may have trouble eliminating copper from their bodies and may experience more negative health effects.

Blowing shankh

Blowing a shankh, or conch shell, is said to have many benefits, including:

- Mental health
  Blowing a shankh can help reduce stress and anxiety, and promote relaxation. It can also help with mental clarity and emotional well-being.
- Respiratory health
  Blowing a shankh can help strengthen the respiratory system and improve lung capacity. It can also help clear the respiratory tract, making it especially good for people with respiratory issues.
- Spiritual practice
  Blowing a shankh is a spiritual practice that can help connect a person with their higher consciousness. It can also help create a powerful spiritual experience.
- Physical health
  Blowing a shankh can exercise many muscles, including the chest, neck, diaphragm, bladder, and lower abdomen. It can also help strengthen the rectal muscles and improve prostate health.
- Environmental purification
  The sound of a shankh is believed to resonate with positive energy and vibrations, which can cleanse the atmosphere of negative energies.
- Other benefits
  Blowing a shankh can also help reduce tongue fat, prevent orofacial problems, and improve the health of the head and face skin.

Connecting with nature

Ancient Indians believed in connecting with nature, which included climbing mountains, bathing in rivers, and walking on grass.

In Ayurveda and Indian philosophy, the human body is made of these five elements. These elements are considered to be the fundamental components of all matter. The Rig Veda emphasizes the importance of the pancha bhoota and states that the harmonious functioning of these elements is the basis of all life systems on Earth.

These elements, known as Pancha Bhutas, are not just the building blocks of matter but are also deeply connected to our well-being and how we interact with the world.

Indian Knowledge Systems: Relevance of Ancient Practices for Contemporary Problems

C. Manasa

Indian Knowledge Systems (IKS) encompass a broad range of traditional practices, philosophies, and sciences that have been developed and refined over thousands of years. Many of these ancient practices hold significant relevance for addressing contemporary problems. Here are a few examples:

1. Treditional Medicine Practices:

During the Vedic times, Ashwini Kumars were the practitioners of medicine and were given the divine status. Dhanvantari was the God of Ayurveda medicine. Atharva Veda was the first book where a mention about the diseases, its cure and medicines can be found. According to it, the diseases were caused by the demons and spirits entering into the human body and can be cured by magical charms and spells. Atharva Veda mentioned cure for many of the diseases which include diarrhoea, sores, cough, leprosy, fever and seizure. However, the era of practical and more rational cure to diseases emerged around 600 BC. Takshila and Varanasi emerged as the centres for medicinal learning.

1.1 Ayurveda:

The origin of Ayurveda dates back to Vedic era.. The earliest codified document on Ayurveda is Charaka Samhita. Another codified document is Susruta Samhita. Before them, Atreya and his pupil Agnivesa had already dealt with principles of Ayurveda way back in 6th century BC.

1.2 Yoga:

Yoga originated in India and was propounded by sage Patanjali around 150 BC.
It works on the level of one's body, mind, emotion and energy
Yoga generally has four broad classifications –
Karma Yoga (utilise the body),
Jnana Yoga (utilise the mind), Bhakti Yoga(utilise the emotion),
Kriya Yoga (utilise the energy).
UNESCO inscribed Yoga in the representative list of Intangible Cultural Heritage in 2016.

1.3 Unani:

This medical tradition of medieval Islam was introduced during 13th century AD with the establishment of the Delhi Sultanate.
It was further developed during developed during the the Mughal Empire The system has Greek (Hellenistic) origin.
Alauddin Khiliji gave royal patronage to Unani system. Many Hakims were there in his court. In Unani, there are various means of treating patients like diet, pharmacotherapy, exercise, massage and surgery.
One of the most popular methods of treatment practised by Unani Physicians is Regimental Therapy (Ilaj-Bil-Tadbeer)

1.4 Siddha:

"Siddha' term is derived from the word 'Siddhi', which means As per Siddha system, the human body is composed of 96 tattvasor basic principles.
Siddha system uses various herbal, animal or inorganic chemical compounds, such as sulphur and mercury, for treating diseases.

Practitioners are called siddhars. Nandhisar is considered the first siddha and the guru of all siddhars.

Presently, it is largely practised in Southern Indian States (mainly Tamil Nadu).

'Neikkuri' or 'Oil Drop test of Urine' is a unique method in Siddha system of medicine for urine examination.

2. SCIENCE AND TECHNOLOGY THROUGH THE AGES:

The spiritual development at the corners of the Indian subcontinent has been prevailing since ancient times and many foreign nations have been enamoured of it. The invaders of this nation including Greeks, Persians, Huns and Mongols embraced many Indian religions such as Buddhism, Jainism and Hinduism. India also has a fair share in enriching the world's material culture.

2.1 MATHEMATICS:

Also called Ganita by the general name, it includes:
- ❖ Arithmetic (Pattin Ganita/Anka Ganita)
- ❖ Algebra (Bija Ganita)
- ❖ Geometry (Rekha Ganita)
- ❖ Astronomy (Khagolshastra)
- ❖ Astrology (Jyotisa)

3. EDUCATION IN ANCIENT AND MEDIEVAL INDIA:

Education plays a crucial role in introducing the culture of the society among the te Educational institutions have always been viewed as temples of learning in India. Historically India had a rich tradition of learning right from the ancient past. The very ideals and Val of Indian society were founded by the educational system in ancient India. It emphasis the moral, spiritual, physical and intellectual aspects of life. The educational practices has spread throughout the world from India. Universities flourished everywhere. Taxila was a noted centre of learning, and it wa known for higher studies in law, medicine, astronomy and the arts. Nalanda was visited by Chinese scholars I-tsing and Xuanzang in the 7th century AD. It attracted scholars from different parts of the world. The Jataka Tales accounted by several foreign travellers including Xuanzang and I-tsing and other sources have depicted the king's active interest in promoting education. After Independence, the nation builders worked hard to universalise the system of education and took several initiatives based on the principles of equality an social justice.

3.1 ANCIENT INDIAN EDUCATION:

The Vedic period had a unique system of education. It consisted of distinctive qualities which were not found in any other parts of the world. The primary goal of the system of education was development of a wholesome personality.The ancient system emphasised on both informal and formal education. Gurukulas and forest schools were generally situated on the river banks. A cordial relation existed between teacher and students. The students regarded the teachers as their parents, Both exchanged were united by the communion of life. The students had to observe strict regulat Education was free. Students had to pay nothing for education in a gurukula or ashram. One unique feature was infusion of spiritual and religious values in education. Schools followed the principle of self-sufficiency.

4. INDIAN PUPPETRY:

Puppetry is one of the ancient forms of entertainment. The element of a puppet being controlled by a master makes it a captivating experience, while the low cost of animation and production

of a performance makes it popular among freelance artists. This form of entertainment gives unrestricted freedom to the artist in design, colour and movement, making it one of the most ingenious inventions of mankind.

5. INDIAN MUSIC:

that Narada Muni (the sage) introduced the art of music to Earth, and that he also taugjit t inhabitants of the Earth about the sound that pervades the whole universe, called Nada Brahm A musical instrument, the seven-holed flute, has been recovered from the sites of the Indus Valley Civilisation. Another instrument, the Ravanahatha, is believed to have originated from the Hela Civilisation in Sri Lanka and is one of the oldest known.Literary traces of music can be found from about 2000 years ago, during the Vedic era. Al seven notes of the raga Kharaharapriya can be found in descending order in Sama Veda. The science of music called the Gandharva Veda is an Upaveda of the Sama Veda. Parts of the instrument Veena are mentioned in Aitareya Aranyaka. The Jaiminiya Brahmana speaks about dance and music collectively. Musicologists have purported theories about the word On being the source of all ragas and notes. Panini, in the 4th century BC, made the first prope reference to the art of making music, but the first reference to musical theory was discussed yashastra, which was written and compiled between 200 BC and 200AD

There are 6 principle raga:

Raga	Time	Season	Mood
Hindol	Dawn	Spring	Sweetness of young couple
Deepak	Night	Summer	Comparison
Megha	Afternoon/ mid-day	Rainy	Courage
Shri	Evening	Winter	Gladness
Manthan	Midnight	Winter	Youthful love
Bhairavi	Morning	Autumn	Peace and devotional

There are 9 principle rasas:

Rasa	Emotion	Presiding deity	Colour
Sringara	Love	Vishnu	Light green
Hasya	Laughter	Paramata	White
Raudra	Fury	Rudra	Red
Karunya	Mercy	Yama	Grey
Bibhatsa	Disgust	Shiva	Blue
Bhayanaka	Terror	Kala	Black
Vira	Heroism	Indra	Yellow
Adbhuta	Amazement	Brahma	Yellow
Santa	Peace	Vishnu	Blue

6. INDIAN HANDICRAFTS:

Handicrafts are an amalgamation of all things crafted by hand. Many States in India have their own handicrafts that reflect the skills and artistic proficiencies in that particular area. Artists skilfully create various types of decorative or functional goods. These crafts are unique as the items are made by hand without the use of automated tools. Many in India undertake handicrafts not only as a way to earn their livelihood, but also as an art to be preserved for future generations. Handicrafts hold particular importance to tribal and rural communities who depend on them for their livelihood. Some of the major Indian handicrafts are discussed in the following sections.

Traditional Regional Sarees

Name	Produced Mainly in	Details
Pochampalli (GI)	Bhoodan Pochampally, Telangana	Silk and cotton sarees with intricate motifs and geometric ikat style of dyeing. Air India airlines crew wear this saree.
Patan Patola (GI)	Patan, Gujarat	Rich handloom silk sarees.
Baluchari (GI)	Murshidabad, West Bengal	These depict ancient stories on the border and pallu. Silk threads are extensively used.
Tanchoi Brocades	Varanasi, Uttar Pradesh	This is a kind of Banarasi saree in which the weaving technique involves a single or double warp and two to five colours on the weft on silk fabric. Banarasi Tanchoi has several varieties such as Satin Tanchoi, Satin Zari Tanchoi, Atlas or Gilt and Mushabbar.
Chanderi (GI)	Madhya Pradesh	Silk, zari and cotton are woven together to make a fabric that is extremely light. It produces a see-through saree.
Ilkal (GI)	Bagalkot, Karnataka	Use of kasuti embroidery commonly uses chariots and elephants as motifs.
Tant	West Bengal	Crisp cotton, printed saree.
Nauvari	Maharashtra	This is a single nine-yard saree also known as Kasta saree.
Bomkai (GI)	Odisha	This is a silk and cotton saree with ikat embroidery and intricate thread work. Bomkai primarily produced by the Bhulia community **Subarnapur**.
Konrad	Tamil Nadu	This fabric usually has either stripes or checks a wide border along with motifs of animals natural elements. It is also called a temple saree.
Kosa	Chhattisgarh	A silk saree
Paithani Saree (GI)	Maharashtra	This is a silk saree embroidered with coloured thread and the parrot is used as a m
Kalamkari (GI)	Andhra Pradesh	For this material a pen is used for painting designs. There are two prominent styles **Srikalahasti style** and **Machilipatnam Pedana style**; both have received GI status.

References: INDIAN ART AND CULTURE BY NITIN SINDHANIA

Rahul Mahala

Title: Indian Knowledge Systems: Relevance of Ancient Practices for Contemporary Problems

A timeless store of wisdom can be found in India's diverse knowledge systems, which have been woven together over many centuries. Indian Knowledge Systems (IKS) offer a distinctive viewpoint on resolving contemporary issues, drawing from ancient writings on governance and medicine as well as ethical and sustainable philosophies. Reexamining and incorporating IKS can be a beacon of hope in an era of global issues like healthcare crises, societal fragmentation, and climate change

Indian Knowledge Systems: An Innovative Heritage

Numerous fields are covered by Indian knowledge systems, such as astronomy, mathematics, Ayurveda, and Vastu Shastra. Long before the idea became popular, ancient writings like the Charaka Samhita and Sushruta Samhita offered frameworks for holistic health. In a similar vein, Indian mathematicians such as Aryabhata and Brahmagupta transformed mathematics worldwide by creating zero, which served as the basis for contemporary computing.

Applications in Contemporary Challenges

Sustainability of the Environment

Harmony with nature is emphasized in ancient Indian philosophies, such as those found in the Atharva Veda. Ahimsa, or non-violence, is a discipline that promotes sustainable life and goes beyond human relationships to the environment. With roots in Indian customs, ideas like agroforestry, water conservation (exemplified by stepwells and irrigation methods), and organic farming provide sustainable answers to today's environmental problems.

Healthcare Ayurveda

A fundamental component of IKS, places a strong emphasis on natural cures and preventative care. The concepts of Ayurveda can support contemporary medicine in a time when chronic illnesses and antibiotic resistance are on the rise. Indian customs gave rise to practices like yoga and meditation, which are today widely accepted as essential in the fight against stress-related illnesses

Education and Values

The Gurukul system is one example of how Indian knowledge systems support experiential learning. By using this approach, the pitfalls of rote learning that are common in today's educational systems can be addressed. Furthermore, books like the Panchatantra and the Bhagavad Gita provide moral guidelines and models for making decisions that are applicable in both personal and professional settings.

Leadership and Governance

Written centuries ago, Kautilya's Arthashastra offers valuable insights into economics, diplomacy, and governance. Even today, policymakers can learn from its practical approaches to resource management, conflict resolution, and public welfare.

Difficulties in Reviving IKS

Not with standing its potential, IKS's resuscitation is fraught with difficulties. These include the demand for scientific proof, mistrust over traditional techniques, and a lack of documentation. These obstacles can be overcome via cooperative research and interdisciplinary studies, guaranteeing that IKS receives the credit it merits.

Conclusion

Indian Knowledge Systems are a treasure trove of solutions for the issues of the 21st century. By investigating and incorporating their ideas into contemporary frameworks, we may build a more just, sustainable, and peaceful society. It is not only about conserving a legacy when we find the wisdom of our forefathers; it is also about utilizing it to create a better future.

Addicted World and its Restorative Measures from Ancient Practices

Sindhuja .Y

In this busy world of 21st century everybody work, day and night to become rich but at the same time, they are giving much stress for their body, physically and mentally to get rid of over stress and to have instant relief they are addicted to various thing many people get into these things because of their loneliness.

Many youths are being addicted because of excess pressure on them due to this competitive world. Addiction may be physical, behavioural or impulse control disorder. Earlier addiction world was used for drugs usage, but now a days with increased networking people are getting addicted to many things like online gaming, gambling, porn, hallucinogen, social media, smoking and many more.

People use such drugs out of curiosity but ultimately leads into addiction. It will damage their social relationship, there financial difficulties cause great legal damage to their lives. If such people are not treated, it even leads to extent that they commit crimes to get money and buy those stuff.

Sign of addiction: They will not have control over themselves and their activities. Even if they want to withdraw the use such things also they cannot stop because they feel weakness, depressed, isolated. Regular use of drugs leads to increase in tolerance in their body, and next time when they take drugs they increase the dose as time passes they feel they cannot live without drugs.

Cause of addiction: Usually whenever we do things of your choice, in healthier way our brain hormone called dopamine which makes us feel satisfied and happy. But this will also be released when we consume opiate products or due to bad behaviour also and it cause excessive release of dopamine which gives pleasure and good feeling. It leads to addiction.

Detection of addiction: parents and peer, their parents should identify it first based on their behavioural changes. consult psychiatrist, psychologist and get necessary treatment for it. In India lone 0.5 million opiate user, 10.5millon alcoholic, 2.3 million cannabis user. And about 10 percent of youths are been addicted in India. If they are not controlled and treated on time, then drugs and other users will increase like a forest fire. So necessary measures must be taken and many such drugs are being imported from other countries in illegal manner. Now a days they are coated with black substances which make it difficult for machine to detect it .so it has been easier to import it now.

The main theme of this essay: <u>Ancient practices to reduce addiction</u>

Addiction has been a part of human history for centuries with evidence of substance misuse and addictive behaviours present in various ancient civilization. The use of alcohol, opium dates back thousands of years. In past addiction was viewed as moral failing or lack of will power. Early response to addiction through yoga practices and herbal remedies. Few other practices involved isolation and punishment. Herbal remedies involve the use of herbs like ashwagandh, Brahmi, Shankpushpi and jatamansi all these are known for their adaptogenic and calming properties. Panchakarma therapy, it detoxifies the body, beneficial in addressing the physical and mental aspects of addiction.

Yoga and pranayama, the breathing techniques help to improve the mental focus, reduce stress and enhance over all well being. It also supports self-awareness and self control which are essential for managing addictive behaviours. Yogic poses like Balasana, Vrishasana, Savasana, and Bhujangasana all these practices must be practiced with trained coach. Pranayama refers to controlled breathing techniques in yoga. It activates the parasympathetic nervous system also known as rest and digest system. Deep breathing increases oxygenation lowers heart rate and induces a sense of calmness. By focusing on the breath, individual learn to observe their thought and craving without acting on them impulsively this increased awareness creates a pause between the urge to indulge in craving and the actual behaviour, allowing individual to make more conscious and healthier choice.

Dietary modifications, ayurveda emphasises the importance of balanced diet. They should avoid stimulants like caffeine and processed food and increases the quantity of fresh fruits and vegetables, whole grains and herbal tea.

Life style recommendations like getting adequate sleep and practicing mindful activities. Sharing their feelings and thoughts to their friends and parents.

Hydrotherapy involves use of water in various forms such as baths, showers and compresses to promote healing, alleviate anxiety, improve circulation and support detoxification processes.

Mud therapy also known as mud packs or bath through utilises natural mud or clay reduce inflammation and support skin health. Mud therapy eliminates toxins from body, improve lymphatic drainage and enhance relaxation. Acupuncture showed evidence in opiate withdrawal.

Conclusion traditional: Indian approaches have potential to offer a comprehensive and holistic path to recovery and well being for individual with addiction and mental health challenges. It is crucial for everybody to look out to go through healthy practices in their day to day life. we can get addicted to things easily but, withdrawal from those things is very difficult and requires combination of various practices to get rid of it. Going through such traditional practices are much cheaper than other methods. At the same time less or no side effects. By medicinal approach individual can get rid of addictives temporarily and return back to practice, but their traditional methods have better healing effect.

From Sciences to Politics: How the Indian Knowledge System is a Foundation for Modern World.

Pal Jatin Parmar

I still remember that one history class when I was in 6th grade. We were learning something about the evolution of human beings and like every other eleven year old, I too was amazed at how different the ancient civilization was from ours. The early humans had a fantastic journey of discoveries and inventions that we, as modern humans, have been honoured and privileged to rely upon. History is nothing but a series of magnificent stories and my teenager mind was quite inquisitive to hear them all. My mother and grandmother have always told me stories of brave kings, feral wars, courageous knights and blissful myths, ever since I was a kid. These oral traditions are something that have still maintained the prosperous and eventful history of India.

All these stories taught me a lot of things about life and the ever evolving world around us. What struck me the most was the fact that ancient Indians lived a scientific as well as a healthy life without using internet or magazines on every step of their way. We have exceled at Mathematics, Physics, Biology, Cosmetics, Medicine, Astronomy and Architecture to name a few. We have been taught and heard of Aryabhata and Sushruta in textbook or television or even from the mouths of our elders. The people who created a new path and made remarkable discoveries in mathematics and medicine, without which the modern world would have crumpled without a foundation.

Mathematics has existed as long as humans have in some way or form. The understanding of value from barter to currency has been a fundamental process for economies throughout the world. Born in Pataliputra in 476 BCE, Aryabhata coordinated and named the first ten decimal places as well as formulated methods to derive square and cubic roots. Decimal system is widely utilised at almost all levels of arithmetic operations across the world and so is the Greek alphabet pi (π) which he estimated to be around 3.1416. The value of pi was later extracted by Greek mathematician Archimedes who declared it at a close 3.1408. Pi is the constant that depicts the ratio of a circle's circumference to its diameter. It is used till date to calculate the area of circular and cylindrical bodies. Apart from this records state that Aryabhata is credited with the understanding of Geometry and Pythagoras Theorem to show that the second- order sine difference is proportion to sine itself. Economies of today's world function along the lines of equations and interest which was also practised and developed by Aryabhata.

Aryabhata was the first to study the movement of Earth around its own axis which was later termed as rotation, the phenomenon that is responsible for the occurrence of day and night. Not only this, he also pointed out that the direction of the rotation was from west to east. One of the most important occurrence in astronomy is the process of an Eclipse. He intricately explained the process of lunar eclipse as to how the shadow of earth is cast on the moon which results in partial or complete eclipse based on the size and distance of the shadow. He also estimated the time duration of eclipses focusing on the observation of the process. And this is not the end to his scientific achievements, Aryabhata was the first astronomer to say that the Earth is spherical in shape and the circumference of the planet is 39,968 km which is very close to the verification done by modern day scientists at 40,072 km.

Some of these theories were later refined by modern and latter mathematicians like Brahmagupta who is also applauded as an original formulator of zero as a well-defined term. In 7th century BCE, Brahmagupta was the first person to treat zero as a whole number with a distinct position and characteristics. Brahmagupta's formula for Area of Cyclic Quadrilaterals as well as inclusion of negative numbers was a milestone for the mathematicians of India. In his records Brahmagupta has suggested the existence of a force that pulls objects towards the centre of the earth. And we all know that this force is none other than the gravitational force, which was famously discovered by Sir Isaac Newton. However Brahmagupta had discovered the existence of this force centuries before Newton was even born and has notable feathers under his hat like planetary positions, cycles of moon and the concept of time including the specific durations of a day, seasons and an entire year.

Making such astonishing discoveries in an age where there was no equipment or computer to assist humans, these theories and records are exemplars of genius and a solid foundation for modern science. Indians have always had a knack for science and it's not difficult for people who have reached for the space to excel at life sciences and medicine. India has an extremely well preserved compilation of medicine and medicinal sciences which constitutes natural and herbal therapy, as well as Ayurveda, a framework of a three energies of Vata, Pitta and Kapha which aims at achieving a balance between mind, body and soul.

Dated back to around 5000 years, Ayurveda is a natural system of treatment followed by physicians and therapists extensively, till date. With the most minimal risk, this medicinal treatment focuses on curing the ailment through natural processes such as use of herbs, breathing exercises and detoxification of body to extract the impurities which results in the cleansing of body and mind. Yoga, a form of exercise that is as old as or older than Ayurveda itself. It could be traced to Rigveda and Upanishads with the most systemized form in Patanjali's Yoga Sutras in 2nd century BCE. Now Yoga has spread across the Western world with recognized health benefits and is widely accepted as a source of exercise of not only the body but also the mind. Yoga promotes spiritual growth with mindfulness and allows the inflow of oxygen into the body.

Ayurveda focuses on an array of herbs as a base for their medicines. Plants like neem, tulsi, ashwagandha, turmeric, coriander and ginger. These herbs are utilised on the basis of their taste, energy and post-digestive effect. Turmeric is used in powdered and paste form to reduce inflammation and helps with arthritis. On the other hand, neem, tulsi and ashwagandha are known as immunity boosters with detoxing properties. The benefits of the remedies are so well absorbed that the entire nation used them as means to boost immunity while battling with a pandemic such as Coivd. This practice also focuses on achieving a healthy body through dietary changes and management of various routines in lifestyle. Having a good digestive system enhances the overall nature of the body.

The most astonishing aspect of Ayurveda is the 5 step detoxification or Panchakarma. It comprises of 5 core therapies namely Vamana which is inducing controlled vomiting to detoxify stomach and helps in diagnosis of asthma and sinusitis. Second comes Virechana which consists of a laxative process to clear out liver and intestines. It is known to be extremely effective for hyperacidity and jaundice. Next comes Basti which means introducing oil through rectum to cleanse the colon. Nasya, administers oils through nasal routes to give heat to the head and sinuses. This therapy is developed to work on stress and migraines. Lastly, comes

Raktamokshana which is the process of purifying the blood which results in excellent measures on skin diseases and inflammations.

Indian medicines have made a considerable advancement not only in therapies but also in surgeries as well as physiotherapy. It is impossible to talk about medicine without talking about Sushruta, who is also referred to as the Father of Surgery, born in 1000 BCE to 800 BCE. In his text Sushruta Samhita, he has laid the foundation of Aryurveda as well as the earliest evidence and framework of surgeries. The text is an incredible compilation of over 300 kinds of surgeries with 120 instruments and equipment to perform them. He is best known for his techniques to conduct cataract and plastic surgeries which was followed for centuries until the modern medicine came up with ophthalmology. Sushruta used the method of couching in which a needle was inserted in the lens, thereby clearing the cloudiness and leading to a clearer vision. His treatment of Rhinoplasty was a process of the reconstruction of nose and nasal structures. The surgery proceeded by taking a flap of skin from other parts of the body such as cheeks or forehead and placing it on the nose in such a way as to retain the original shape and natural effect of the face.

Along with this Sushruta was an expert in Amputation, Prosthetics and Lithotomy. In his text he has mentioned the proper usage of forceps and knives to perform amputation and ensure that the patient has no blood loss and recovers without any infections. Some of the very early mentions of prosthetic body parts have been mentioned in his Samhita. His surgery of removing kidney stones is a concrete foundation on which the modern studies of urology has been built. Sushruta used to incise the perineum in a way to extract the complete stone from the body to avoid future stones and applied the most minimum stress on the surrounding tissues to prevent any further injuries. Surgeries on ear lobes, concealing scars, treating fractures with the help of bamboos and herbal oils were carried out in his time.

The world still looks up to Sushruta, as he had a holistic approach and prevention oriented treatment where in an emphasized a great deal on pre and post-operative care. Many surgeries are fatal because of ignorance of these things but his vast understanding still plays a key role in today's healthcare industry. Sushruta's detailed and deep knowledge as well as records of his medical procedures have served as an inspiration to medical professionals for years especially in the Indian sub continental region where his practices are acknowledged and followed by professional till date. The Samhita was later translated in Arabic, Persian and even Latin. It became a guide for surgeons in the boom of medieval period, followed by the Renaissance. Sushruta's work is a true inspiration for the past, future and contemporaries alike.

Taking a different direction from the physical sciences, we have to dive into the knowledge system that the ancient Indians held in social sciences such as Political Science and Economics. Nations across the world cannot possibly function without a perfect knowledge of the economy or the insides of the politics. The most outstanding framework of these can be found in Kautilya's Arthashastra. More famously known as Chanakya or Vishnugupta, he was the minister in the court of the Mauryan King Chandragupta Maurya. In this text, Kautilya delved into the functioning of a kingdom and the duties as well as the responsibility of the king as the head of the state. The text is a compilation of 15 books which consists of 150 chapters, further divided into 180 sections and is made up of over 6000 shlokas. What makes this text so profound even after so many centuries is the connection between the organization and politics of that time and the similar viciousness that exists within and between nations in today's world.

The range of Kautilya's treatises expands from Warfare and military arrangements on one end to taxation and equilibrium of demand and prices on other. Formulation and utilization of standardization of weights and measures is also discussed in this work of Chanakya. In comparison to today's world, the position of the king could be aligned with that of the Prime Minister or the President who is responsible for administration for the functioning of the country. The king should possess the qualities such as courage, fairness, discipline and the ability to handle the executive, legislature and the judiciary. Similarly the head of the country should be in possession of these qualities to keep up a stable government and carryout stable administration activities. The royal court had a council of ministers, each heading a portfolio which is still found in the government as cabinet and the council of ministers.

The Economical aspect of the kingdom ran pretty much around the lines of the functioning of economies today. There was a system of tax and the revenue was generated through taxation, land policies and trade gains. Kautilya emphasized on the need to maintain ethical governance and minimize corruption. The sense of justice was very strong in the Mauryan Empire. The punishments for the crimes was in proportion to the crime committed and every citizen was equal in the eyes of law. The goal was to have a welfare state. The text gives a detailed account of the military and defence structure of the kingdom. Defence is a very strong necessity in today's age as rivalries between states will never cease to exist. There was also a mention of an espionage system where a network of spies or informants had been places to keep the king aware about any internal or external threats. Till date, spies are established at various locations to keep the security of the country at the top. The process of running the kingdom is called as the 'Mandala Theory' by Kautilya

The alliance between countries is not a new concept but a tradition that has existed for centuries. The king considered the neighbouring states enemies. On the other hand the enemies of the enemies were considered friends. An alliance was pursued with a stronger kingdom while a plot was devised to take over the weaker ones. There was a position of being neutral much like India's position in the contemporary world. Kautilya also explained how countries work for fulfilling their self-interest rather than achieving a moral and ethical alliances. The alliances like NATO, BRICS or ASEAN in today's world show how Arthashastra's legacy and how it is religiously followed in international relations as well as politics. Under Kautilya's guidance and the leaderships of the Mauryan kings, the Mauryan dynasty was one of the largest kingdoms of the Indian sub-continent.

The tradition of peace and holistic living was a part of life of ancient Indians. Often, we do not get credit for our discoveries because of the racist mind set and cultural prejudices that the west hold against us. But the essence of the Indian legacy sis still upheld and maintained in every discipline that exists and every profession that has emerged. The roots of medicine, mathematics, architecture, literature, language, music, dance and art have been inspired from the Indian culture on many levels. The relevance of this knowledge has not been lost and has been passed on to generations after generation, orally or in form of texts. From Vedas and Puranas to Upanishads and Samhitas, each text written about this legacy is like gemstones for us.

The legacy of the Indian Knowledge system is so vast and incredible that it is not possible to fit the teachings in a volume of books or a mere essay. We are extremely lucky to have a history of such wise ancestors guiding our paths for centuries till now and centuries to come. India has been invaded and looted by many outside rulers including the British. Even after having such

a traumatic and bone breaking history, we have persevered and continued to carry forward the legacy left to us by our great predecessors. The pride of belonging from this rich land, fills us with immense ecstasy. This knowledge system is a gift that is left for us and it is our responsibility to keep it safe and add on to it as a gift and right of our future generations.

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