

VOL 1 | ISSUE 2 | JULY 2020

SCIENCE ARTICLES

A collaborative platform aimed at kindling the learning process. We aim to provide the perfect space for thoughts to grow and knowledge to flow through science in all its forms.

SHORT STORIES & ARTICLES

POETRY

HOBBY & ART

AUDIO & VIDEO

FOUNDING EDITOR
Dr K SRIKALA GANAPATHY

ADVISORS

Ms. A ANNAPURNA SHARMA
Ms. MALATHI

MANAGING EDITOR / WEB DESIGNER

Ms. SREEPRADHA VENKATRAMANAN

EDITORS

Rtd. Prof. LATHA PREM SAKHYA Ms. SUJATHA VARADARAJAN Dr. C. J. THIRUPURASUNDARI Dr. K. VEENA GAYATHRI

SCIENTIFIC ARTICLES

PRIMARY SCHOOL LEVEL PREPARATION STRATEGIES FOR SCIENCE - J.P. BHARATHI	1
BUTTERFLIES - FASCINATING CREATURES OF OUR EARTH - C. HADLYN	2
SCIENCE OF WATER DROPS, SOAP BUBBLES & SURFACE TENSION - PART - II - S. JOSEPH WINSTON	4
CHECK, YOU MAY HAVE THESE SYMPTOMS - Dr. MAHALAKSHMI SARATHI	12
IS IT POSSIBLE TO OVERCOME EMOTIONS? THINK Dr. NITHYAKALYANI	14
ALTERNATIVE TECHNOLOGIES FOR A CLIMATE CHANGE RESILIENT INDIA - SAMRUDHI DASH (INARA)	17
INFOGRAPHIC FOR THE SCIENTIFIC COMMUNITY - Dr. SUJATHA	22
THE STORY OF CHEMISTRY PART- II - SUJATHA VARADARAJAN	25
BE POSITIVE - SCIENCE BEHIND POSITIVITY - TOSHINI	31

SHORT STORIES & ARTICLES

ECOLOGICAL WATERLOO??? - HEMA RAVI	35
OUR FRONT-LINE HEROES - JELLIE N.WYCKELSMA	37
TIME - JELLIE N.WYCKELSMA	38
AUTOBIOGRAPHY OF THE UGLY DUCKLING - Rtd Prof LATHA PREM SAKHYA	41
REACHING OUT TO BROKEN SOULS - MADHUMATHI H	44
INTRIGUING HOUSE SPARROWS - T S MANOHAR	46
FORGETTING TO REMEMBER - T S MANOHAR	47
THE SUBSTANCE OF A THOUGHT - ORBINDU GANGA	49
THE HAZARDOUS IMPACT OF JUNK FOOD IN OUR DAILY LIFE - PARVATHI	51
THE ECONOMICS OF HIGHER EDUCATION IN INDIA - Dr S PADMAPRIYA, Ph D	55
TOTAL LOCKDOWN FOR 21 DAYS - PRASANNA S	58
ARE YOU GRATEFUL ENOUGH? - SHANMUGA PRIYA	60
THE WRITER - Dr VARANASI RAMABRAHMAM	62
DANNY, THE FUNNIEST - V VARSHA SHREE	64

POETRY

NATURE NEVER LIES - M ARIVUKKARASI @ AAZHI (PEN NAME)	65
DUSK - M ARIVUKKARASI @ AAZHI (PEN NAME)	66
WHEN WE MET - BHAGYASHREE MISHRA	67
ARTIST VS SCIENTIST - DHANASEKHARA PANDIAN M	68
I AM CHOKING - GITI TYAGI	69
MY CHRYSALIS - GITI TYAGI	71
THE ALARM - KEERTHANA RAVIKUMAR	73
FLUTTERING DREAM FLOWER - LEENA RAJAN	75
COVID'S VENTILATOR - LEENA RAJAN	76
SWEET SYMPHONY - MEDHA TRIPATHI	77
WINDOW OF HOPE - MIDHUNA MARAN	78
THE POWER OF THOUGHT - ROOPA SUBRAMANI	79
THE LOCKED LIFE (BASED ON THE THEME OF COVID-19) - RUMPA RAY-GHOSH	80

POETRY

BOUNTIES OF NATURE - B S SAROJA	81
"I'M UNIQUE" - B S SAROJA	82
HUG AND KISS - SETALURI PADMAVATHI	83
STRANDED ON THE PRECIPICE OF A NEW VENTURE - The musings of a teenager who was supposed to spend her last year of school actually at school and not at home SHREYA SEVELAR	84
AN OWL POST TO THE GROWN UP FRIEND - SIVA AMRITHA NIVEDHIDHA R	85
THAT ONE DAY S SWARNA DHEETCHITHA	86
DIS -EASE, CHALLENGE ACCEPTED - Dr THIRUPURASUNDARI C J (DAZZLE)	87
THE PARROT IN MY MANGO TREE - VIDYA SHANKAR	88
A PHOTOGRAPH - M VISHNU PRIYA	89
OH MY DEAREST MOBILE PHONE M VISHNU PRIYA	90

SCIENTIFIC ARTICLES

PRIMARY SCHOOL LEVEL PREPARATION STRATEGIES FOR SCIENCE

J.P. BHARATHI

Science has become an integral part of everyone's life. Science conscious citizens can help the world to avoid major upcoming problems. In the primary level, science should be taught in such way to create enthusiasm. Scientific temperament should be created at a very early age.

What is sky, sun, space, earth, stars and nature should be focused in the primary schooling. Slowly, we can move towards, why the flowers blossom, what is rainfall, why is sun hot, what happens if there is no crop - should be made clear to the children. Next, we need to help them understand heat, pollution and littering, spitting, hygiene and so on. A child should be taught not to litter in the open. If these areas are focused at this stage, the problems of society can be addressed at the secondary and higher secondary levels. If this mindset is tuned from the primary level, I think we need not see more Covid-19 in our lives.

Also, we should highlight on what is the slogan stop the drop? Why resources should be used sparingly? What happens if there is no crop and agriculture? What happens if air is polluted? What happens if birds and animals are extinguished from this earth? Why do natural calamities occur? What is the effect of noise pollution on the nature?

We don't adhere or follow the highest principles taught by the greatest religions of the world. But we will surely accept the truth and rightful thinking taught with a logical reasoning. After all, there won't be anyone, who can deny a child who is preaching the righteousness with his innocent wisdom. Science should be approached beyond all community barriers and it has to start at the primary stage of schooling. The lessons from grade I to grade V should only focus on environmental science, which trains a young mind in the right direction. His thinking beyond class room and books will enable him to apply and learn effortlessly. His answer to every scientific question becomes so obvious, that a child only has to use his mind for thinking and not for rote learning. This will create a new enthusiasm in the young minds towards science subjects.



SCIENCE SHORE| PAG

BUTTERFLIES - FASCINATING CREATURES OF OUR EARTH

C. HADLYN

"I almost wish we were butterflies and lived but three summer days- three such days with you I could fill with more delight than fifty common years could ever contain."

John Keats

Everybody knows about the beauty of butterflies. But they do much more than simply make the world a prettier place. They carry pollen from plant to plant effecting pollination for sustaining every generation. In this article I like to share the self defence in butterflies. Birds are the most important enemies for butterflies. The larval and adult butterflies are preyed upon by bats, lizards, spiders, dragonflies, ambush bugs, robberflies etc. To avoid or to escape from the predators some butterfly species evolved some tricks to confuse the predators.

 Position of Butterfly wings Anglewing butterflies (Polygonia sp.) spread the underside of the wings at rest; if predators come too

close it flashes the bright rust coloured upper side of their wings. This sudden surprise of colour change confuses the predator and makes the insect to escape.



Shape of Butterfly wings

Swallowtails such as Common rose (Pachliopta aristolochiae) and Malabar Banded Peacock(Papilio buddha) have tail like shapes on their hind wings to escape from the predators.



Spots on Butterfly wings

Brush footed butterflies (eg. Peacock Pansy – Junonia almana) from Nymphalidae family have large eye spots on the upper side of the fore wing. These eyespots serve as a symbol of danger and enough to intimate predatory birds.



SCIENCE SHORE | PAGE

· Distasteful butterflies

Black colour with red spots occurs on the wings of Crimson rose (Pachiliopta hector) and Common rose(Pachiliopta aristolochiae) butterflies. These are distasteful to birds and predators the reason behind this is they feed on poisonous milkweed plants at larval stage.



Camouflage

Some butterflies look like dead leaves blend into their environment and escape from the predators. Eg. Indian leaf butterfly (Kallima inachus).



Increasing Carbondioxide levels

This situation may be making milkweed plants (Eg. Asclepias curassavica) – the only food for monarch caterpillars will eat become too toxic for them.

"We have the capability to save the butterflies and other species in our earth. But the question is,

"Whether we have the will to do it or not"?

HOW YOU CAN HELP THE BUTTERFLIES?

- Plant more plants that are native to your location for the butterflies to lay eggs. Even just a single potted plant can help a species to grow.
- Provide nectar rich plants.
- Offering plant as a gift to others may create awareness to understand climatic change, getting warmer and what the solutions are.
- Don't use pesticides in your own garden.

You get difficult in your life
Just remember one thing
You are transforming life – becoming a butterfly!!!

CIENCE SHORE | PAGE

SCIENCE OF WATER DROPS, SOAP BUBBLES & SURFACE TENSION PART- II

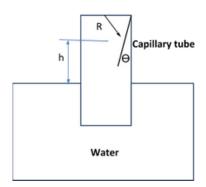
S. JOSEPH WINSTON

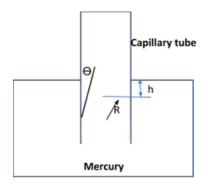
How to measure surface tension?

In this edition, we will learn to measure surface tension and its various applications. You may recall that we had discussed the scientific principles of water drops, molecular forces and surface tension.

In order to clearly understand the interaction behavior of the liquids with other materials, it is required to establish the property of the fluid which defines the forces between them. The easy way to represent such force is through the coefficient of surface tension of a liquid. The coefficient of surface tension of a liquid is the force acting on the surface of the liquid at normal to a line of unit length in the surface of the liquid. The units for surface tension are therefore Newtons per meter (Nm-1) or in smaller scale dynes/cm (1 dyne = 1e-5 N). It becomes increasingly important to establish this property by means of experiments to easily compute the surface forces of the same liquid with interfering surfaces. Though there are many experiments available to measure coefficient of surface tension, the capillary rise method is the oldest method.

Capillary rise method for measuring coefficient of surface tension





Schematic representation of the Capillary rise method for finding coefficient of surface tension.

Fig.1 shows the experimental arrangement which is fairly simple to build. The setup has a bath of water or the liquid to be tested and a capillary tube inserted into the liquid. By the adhesion of the water molecule with the glass tube, the water molecules are pulled up inside the capillary tube. The rise of water inside the capillary tube is completely held by the surface tension force. Hence it is easy to write the force balance equation and compute the coefficient of surface tension. Let us have the variables as follows;

- R- Radius of the capillary tube(m)
- γ Coefficient of surface tension (N/m)
- h- Rise of water in the capillary tube (m)
- ρ- Density of water (Kg/m3)
- g- Acceleration due to gravity (m/s2)
- ⊖ Contact angle of the liquid with the capillary tube (Degrees/Radians)

Table.1 Coefficient of Surface Tension for different liquids		
Liquid	Coefficient of surface tension (mN/m ⁻¹ , milli Newton/meter) 20°C	
Water	72.86	
Mercury	486.50	
Ethanol	22.39	
Soap Bubble	25.00	

The surface tension force acts along the liquid contact point around the inside of the capillary tube and can be expressed as

$$F_{ST} = 2\pi R \gamma Cos(\theta)$$

For P

Hemisphere free body diagram

Fig. 2 Force balance in a water drop

The total weight force supported by the surface tension force is the weight of the liquid column in the capillary tube above the mean surface. Fig. 2 shows the force free body diagram. The total weight force can be easily computed from the following equation;

 $F_{\text{water}} = \pi R^2 h \rho g$

Equating the forces $F_{ST} = F_{water}$ and cancelling the same terms from both sides of the equation will yielu,

The coefficient of surface tension as;

$$\gamma = \frac{Rh\rho g}{2Cos(\theta)}$$

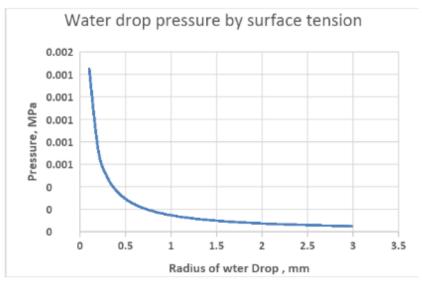


Fig. 3 Variation of water drop pressure with respect to the drop diameter

Now by conducting experiments with different fluids with the same capillary tube geometry, we can find out the Coefficient of surface tension which will be useful for all the scientific computations where the liquid interface with any material happens. Table. 1 shows the coefficient of surface tension of some of the liquids. The contact angle for water on the tube may be Θ =0 $^{\circ}$ and for mercury the contact angle is Θ =180 $^{\circ}$. Hence the above equation may reduce to;

$$\gamma = \frac{Rhpg}{2}$$

For mercury the $cos(\Theta) = -1$ which gets cancelled by negative 'h' value.

How to compute the pressure inside the water drop?

From the foregoing knowledge, we know that water has a coefficient of surface tension property at room temperature as 72.8 mN/m. Hence the surface tension force created can be computed as follows;

$$F_{sT} = \gamma L$$





Fig. 4 Soap Bubble internal pressure due to surface tension.

Where L is the length through which the surface tension acts which is the circumference of the water drop at any section.

Therefore the length can be easily calculated as; $L=2\pi R$

Therefore,

 $F_{ST} = \gamma 2\pi R$

The internal pressure can be computed from the basic formula,

P=Total force X projected area

$$P=F_{st}x \pi R^2$$

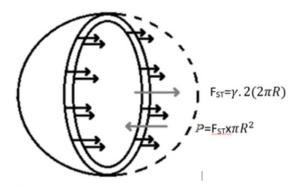


Fig.5 Soap bubble internal pressure





Fig.6 The pond skater using surface tension to freely slide on water surface

The above equation gives the pressure in the water drop which is created by the surface tension. Fig 4 shows the internal drop pressure due to surface tension with the variation of the water drop diameter. This is evident that the smaller drop size has more internal pressure set up which becomes increasingly stable against drop collapse due to inertial or gravity forces. Hence any larger drop in the air becomes more tending to change shape due to the influence of the inertial and gravitation forces and once it collapses into smaller drops, they become more stable for further collapse which is quite evident from our real-life experience.

It is quite inquisitive now to compute the pressure in the soap bubble represented in Fig. 5 due to surface tension. Here the surface tension force will act along the circumference two time which is one on the outside surface of the bubble and one inside surface of the bubble as shown in Fig.4.

Hence the equation will deduce to;

$$P = \frac{4\gamma}{R}$$

Benefits of Surface tension

This very interesting problem when understood can be applied on real life events and become easy to scientifically understand so many phenomena and mathematically model them. The common pond skater insect shown in Fig. 6 which slides freely on the pond water surface is quite interesting to watch and marvel at the use of the surface tension. This can also be well proved by a simple homemade experiment by making a steel jam clip to float on the surface of water.

The surface tension is like a blanket on the surface of water pulling the object sidewise in all directions and setting them float which is addition to the buoyancy force. Buoyancy force is the force of the liquid on the floating objects which is equal to the displaced weight of the liquid by the object. These forces together resist the object to sink down. Understanding the surface tension makes it easier to make scientific products to make use of the surface tension for the common use. One best example is the use of the fabric designed to have a good surface tension property to repel water for the use as rain coats and umbrellas. To understand it better on the product developments, it is very important to control the contact angle as shown in Fig. 8 of liquid with the interacting material to meet the desired designed objectives. One more very good example is the design of detergent products.

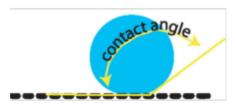


Fig. 8. Contact angle

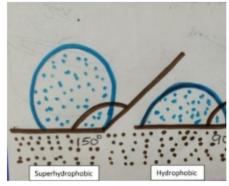


Fig.9 Hydrophilic and Hydrophobic nature of liquid

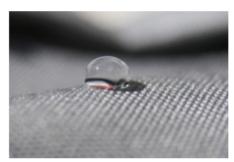


Fig.10 Water drop over a water proof fabric

~ · · · · ·

The detergent products are designed to have low surface tension ingredients to make the water stickier to reach out through the fabric and also to repel to clump the oil particles degreasing the fabric for a clean wash. Similarly, that is how the detergent soap removes oil and grease from our hands when we wash with them. In order to understand the sticky and repelling characteristics, we need to learn about the contact angle of liquids with the interacting material.

Hydrophobic or Hydrophilic?

The Hydrophilic behavior defines the stickiness of the liquid with the interacting material and can be seen from the capillary effect due to this. However, the repelling nature of the liquid with the interacting material is known as hydrophobic property. Based on the contact angle of the liquid with the surface, one can say if it is a hydrophilic or hydrophobic nature of the liquid with the material as seen from the Fig. 9. This also help us to understand how the raincoat and umbrella fabric materials are chosen to stop water getting through it as shown in Fig.10. Fig 11, shows some of the surface tension effects by the water drops on the plant leaves.



Fig.11 Surface tension keeping the drop rolling over the plant leaves without sticking, hydrophobic,

Surface tension is an interesting phenomenon which help us to understand many real-life problems. This also help us to formulate the mathematical equations to easily simulate the behavior of liquids which are in contact with the other material surfaces. The oil flow through the wick to the flaming lamp, the detergent to degrease oil and make oil to clump and separate from sticking material, pond skater are classic examples of Surface tension. Constant research is on the product development on the detergent side, to make the best detergent to have a hydrophilic nature to have water stick to the fabric and also to have the detergent hydrophobic nature to retain the water as separate clump suspended in water. Science of surface tension gives a solution to all these problems and beyond.

SCIENCE SHORE PAGE 1

References

F. L. Roman, J. Faro, and S. Velasco, "A simple experiment for measuring the surface tension of soap solutions"

http://zzm.umcs.lublin.pl/Wyklad/FGF-Ang/2A.F.G.F.%20Surface%20tension.pdf https://socratic.org/questions/how-does-detergent-change-surface-tension http://www.planet-science.com/categories/under-11s/chemistry-

chaos/2011/06/soap---how-does-it-get-things-clean.aspx

https://en.wikipedia.org/wiki/Surface-tension_values

http://scipp.ucsc.edu/~haber/ph5B/bubble.pdf

Mikhail N. Shneider 1, and Mikhail Pekker, "Surface tension of small bubbles and droplets and the cavitation threshold", Department of Mechanical and Aerospace Engineering, Princeton University, Princeton, NJ USA.

SCIENCE SHORE | PAGE

CHECK, YOU MAY HAVE THESE SYMPTOMS

Dr MAHALAKSHMI SARATHI

If you are being judged as a troublemaker, criticiser, lazy or undisciplined by others, it may not be true as you could be suffering from Attention deficit hyperactivity disorder (ADHD). When you hear about the term "ADHD" you may visualize only a hyperactive child in your mind but this may not be true in all cases as this neuro developmental disorder can even extend to adults. ADHD individual could break a relationship or a job without prior thinking, but regret for the same in future. They are unorganized even in their healthy routines, forgetful in nature as losing things on daily basis, experience emotional turmoil upon certain situations, day dreamers with uncared behaviour about surroundings, find difficulty in time management, self-focussed and unable to control fidgeting in their sitting place are some of the alarming symptoms. Careless mistakes done by ADHD individual are not due to laziness and lack of intelligence, but it is due to difficulty in following instructions and executing in an orderly manner. Many of us think that they cannot concentrate or they are inattentive but it is not so as they can concentrate more on what they love and inattentive to the things that they are not interested and need much more effort to do distasteful jobs. They also show interest on various activities but move onto the successive tasks that catches more interest leaving behind the initial task that they started off. Hearing all these symptoms you need not be scared or worried until it interrupts in various aspects of your life such as family life, social life, work place, relationships, etc. It must be attended only when these symptoms are visible even in dangerous situation. Surprisingly in case of emergency, the thrill and pressure can boost them to attain super-human powers to accomplish great things.

Is medication the only available solution for ADHD? No, medication alone could not help in the situation as they stimulate central nervous system with an increase in the feel-good chemicals such as dopamine and norepinephrine. However, these drugs could cause serious side effects such as headaches, hallucination, allergic reaction, and emergence of negative behaviours like suicidal thoughts. In some cases it also affects the white matter of the brain. So what could be done? Teamwork of various therapies such as psychotherapy, behaviour therapy and training in social skills could help to overcome the situation. Opening/Venting out their feelings makes them self-aware about their strengths and weakness traits to handle personal relationships, get emotional support from family members to avoid self-destructive behaviour such as depression and addiction and opt for a constructive choice.

SCIENCE SHORE| PAGE

Training their social skills such as sharing, learning to deal with a difficult task, practising meditation and exercises could calm down their mind. Did you know that some of the well-known successful people like Michael Phelps (won 28 Olympian medals), Karina Smirnoff (professional dancer), Justin Timberlake (singer cum actor), Simon Biles (Olympic gymnast) and many more suffer from ADHD. A condition like ADHD will not stop an individual to lead a happy and a successful life. More than treatment, practising an organized behaviour will help these individuals to develop strategies to handle a critical situation in a better manner and move ahead in life as by the words of comedian Rick Green from Canada "I used to suffer from ADHD. And now I just have it".

References

https://www.wbur.org/commonhealth/2013/02/18/ten-facts-adhd

https://www.cdc.gov/ncbddd/adhd/facts.html

https://www.healthlinkbc.ca/health-topics/hw164660

https://childmind.org/article/quick-facts-on-adhd/

https://www.healthline.com/health/adhd/celebrities#9

SCIENCE SHORE | PAGE

IS IT POSSIBLE TO OVERCOME EMOTIONS? THINK......

Dr NITHYAKALYANI

How do you feel when you were seriously describing the turmoil of emotions felt during a certain situation to another person who was solely responsible for it was just asking you question after question? Most of us would have faced this kind of situation in our lives where we would have expected some responsibility/sympathy on their part for those thoughts, but instead just questioning on the reasons for our outburst would have made us feel uneasy. We would also be confused on how could one possibly try to find reasons for our emotions when they have always been considered it to be a collection of insights, intuition and gut thoughts. Pondering on these questions for a while, one would become aware that finding the logic behind emotions is not only essential but it also allows one to understand why people behave in a certain way they do in a given particular situation thus giving a chance to respond instead of merely reacting to it. Let's take an incident, where you meet a person for the very first time and do not like them right away without a reason. When you had decided to go with your emotions, you strongly feel it as an intuition and hence will try to stay away from that person. But once you begin to analyze the reason behind that particular onset of emotion, you may acknowledge those feelings were due to their resemblance in some way to another person who may have caused you some inconvenience previously. Realization of this reason behind the stay-away feeling would give you a fresh chance to embrace the person for who they are in your life with no preconceived notions.

Looking from an evolutionary point of view, the main difference between humans and animals is in the development of prefrontal cortex and the logical reasoning associated with it in the humans while the animals solely rely only on amygdala part of the brain to interpret things presented to them. But when it comes to emotions, we humans also move away from our evolved prefrontal cortex to amygdala portion of our brains to respond to the events as it has been evolutionarily conserved for dealing with emotions. So taking a minute to think on the reason for the arousal of emotion in the first place creates an awareness on its arrival which then shifts our thought process from amygdala to prefrontal cortex thus making us deal with it in a logical and rational way. People had often been advised to control their emotions to attain heights in life but we had always found it difficult to take stock of our feelings as we really didn't have the right tools to deal with it. But a simple solution such as finding the logic behind your emotions could really help us to manage it well.

SCIENCE SHORE PAGE 1

So much said, it's understandable that it's quite difficult to pull it off efficiently under all circumstances but let's say, it's just a beginning where we should take baby steps in the journey towards our goal of understanding emotions.

References

- 1. The Mouse Nervous System Chapter 30 Prefrontal Cortex, 2012, Pages 727-735 Keith B.J. Franklin, Yogita Chudasama
- 2. https://www.thescienceofpsychotherapy.com/prefrontal-cortex/
- 3. Shuren JE, Grafman J. The Neurology of Reasoning. Arch Neurol.
- 2002;59(6):916-919. doi:10.1001/archneur.59.6.916
- 4. Adam K. Anderson. Feeling emotional: the amygdala links emotional perception and experience. Soc Cogn Affect Neurosci. 2007 Jun; 2(2): 71–72. doi: 10.1093/scan/nsm022
- 5. Temple Grandin, Mark J. Deesing. Genetics and the Behavior of Domestic Animals (Second Edition), Chapter 1 Behavioral Genetics and Animal Science, 2014, Pages 1-40

SCIENCE SHORE | PAGE :

ALTERNATIVE TECHNOLOGIES FOR A CLIMATE CHANGE RESILIENT INDIA

SAMRUDHI DASH (INARA)

Last year, Indonesia an island nation in the Indian Ocean decided to move its capital from Jakarta. The reason lies not in politics or economics, but in the drastic climate change. Jakarta, home to 10 million people is at the immediate risk of being submerged with some parts sinking as much as 25cm per year. Jakarta's precarious position is thanks to a combination of two factors – rising global sea levels and diminishing underground water supplies. The grim picture is repeated elsewhere too. In the Pacific, atleast 8 islands are being swallowed by the sea in the last century.

India is very vulnerable to climate change, especially because of the melting of the Himalayan glaciers and changes in the monsoon cycle. According to the latest report of the United Nations body to assess climate science, the Intergovernmental Panel for Climate Change (IPCC), climate change is likely to make rainfall erratic, lead to rising sea levels, and make extreme weather events like droughts, floods, and heat waves more frequent.

In 2019, India witnessed all of these extreme weather conditions, from heat waves to flash floods. While in parts of northern and southern India, states like Bihar, Karnataka and Maharashtra were struggling with drought-like conditions in the summer, the Northeast and western coastal areas had been battered with torrential rain in the ongoing monsoons. According to weather website El Dorado, out of the 15 places that received the most rainfall across the globe in the last 24 hours, eight are in India. Only two months back, the same weather listing source had counted four places in India among the world's hottest 15 places.

Current Scenario of Climate Change Resilience in India

Under the Paris Agreement, India has made three commitments. India's greenhouse gas emission intensity of its GDP will be reduced by 33-35% below 2005 levels by 2030. Alongside, 40% of India's power capacity would be based on non-fossil fuel sources. At the same time, India will create an additional 'carbon sink' of 2.5 to 3 billion tonnes of carbon dioxide equivalent through additional forest and tree cover by 2030.

Need of the Hour - Alternative Technologies

Most methods of adaptation involve some form of technology – which in the broadest sense includes not just materials or equipment but also diverse forms of knowledge. Unlike those for mitigation, the forms of technology for adaptation are often fairly familiar. But other forms are much more recent, involving advanced materials science, perhaps, or remote satellite sensing.

For all these technologies, one of the main challenges is to ensure that they serve those in greatest need – the developing countries and most vulnerable communities, particularly those who live and work in close contact with the natural environment and who stand to lose most, and perhaps even their livelihoods, when ecological resources are under threat. And, of course, methods of adaptation ultimately need to be boosted by political and social action.

The United Nations Framework Convention on Climate Change secretariat and the Expert Group on Technology Transfer carried out an extensive review of adaptation technologies and assessed their possibilities in five sectors: <u>coastal</u> <u>zones</u>, <u>water resources</u>, <u>agriculture</u>, <u>public health and infrastructure</u>.

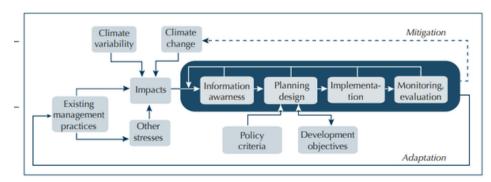


Fig.1: Iterative steps in Climate Adaptation

Low-Carbon Rural Development:

Two-thirds of the Indian population lives in rural areas in small farms with little or no access to electricity. 70% of the population uses stoves that burn firewood and dung. These stoves release smoke into Indian homes contributing to greenhouse gas pollution and putting the villagers at risk of diseases including lung cancer and pneumonia.

The strategy of, "low-carbon rural development," can lift millions of people in India's country side out of poverty while also addressing climate change and food and energy security.

Activities include:

- Installing household and community biogas units to power clean-burning methane stoves;
- Replacing conventional wood-burning stoves with more efficient ones;
- Providing solar-powered lighting; and
- Promoting scientifically and economically sound climate-smart farming techniques through use of information technology (IT) platforms like smartphone apps.

Adaptation Strategies

'Adaptation' is like protecting yourself against a punch that will land. India has also been mitigation-centric; it is time to bring focus on 'adaptation'. And for adaptation, the time has come for two major steps.

1. Inter-linking of Rivers:

The first is to give a big push to a 150-year-old idea — inter-linking of rivers (ILRs).

With floods and droughts likely to occur in different parts of the countries, possibly alongside each other, there is no option but to make ILR happen, and fast.

It is a leviathan project that will take decades to complete — if begun today. There are two components of it: the Himalayan and the Peninsular, with 14 and 16 links respectively. The idea is to build a dam on one river so that the water level rises at the head of canal, allowing water to flow by gravity to the next river.

India today has 5,100 large dams, which have walls at least 15 metres tall; ILR will require 3,000 more. The project will also involve building 15,000 km of new canals. If brought to fruition, ILR will bring 35 million hectares — over twice the size of Andhra Pradesh — of additional land into cultivation, and 34,000 MW more of hydroelectricity.

In 2014, the government began work on ILR with a great sense of purpose. While things have not moved fast enough, the government has continued to show seriousness about the programme. In April 2015, a Task Force for Inter-linking of

Rivers was formed, which has met ten times so far. Feasibility reports have been completed for 13 of the 16 peninsular projects, three of which also have 'detailed project reports'. Alongside, moves are afoot to set up a National Interlinking of Rivers Authority. Till recently, ILR was an idea to support agriculture and hydro power generation, which would also, incidentally, help balance-out water between surplus and deficit regions.

But today, ILR is a climate-change imperative — something that you can't do without. If environmentalists have technical objections, they should come up with technical solutions, but not stop the programme.

2. GM Crops

The other adaptive measure is genetically modified crops. GM technology is a major component of 'climate-smart agriculture'. We would need drought-resistant crops, and crops that produce more on the same patch of land so that climate-impairing 'land use' is minimised. India has been saying 'no' to GM technology, more out of the fear of the unknown than any scientific reasoning. Seeing ghosts in every dark corner is not going to help. GM technology has been in use globally for over two decades and millions of people have been eating GM foods for years.

Globally, the area under GM crop has risen 136 times in 20 years, from 1.7 million hectares in 1997 to 230 million hectares in 2017. Countries like the US, Canada, Argentina, Brazil and Bangladesh have greatly benefited by GM technology. Fortunately, Indian farmers have woken up to the benefits of GM and are on a 'civil disobedience', cultivating GM crops in defiance of the law. A right step. Law cannot take away benefits that technology bestows.

Other Alternative Technologies

"There is plenty of space at the bottom"

This was quoted by the Japanese scientist in 1971 who coined the term nanotechnology!.

Nano-technology has the potential to change the entire situation. Think when we will work at the atomic level of carbons, think when heat instead or getting trapped, could be released, think when the plastics and other combustion takes

places, it releases oxygen rather than carbon dioxide. Yes, we can, science has radical weapons, the weapons which could turn the path of carbon towards the space. For this, we must work seriously on applications or nanotechnology. We have to work on atomic level to change the entire atomic behaviour of carbon and heat. Wait! We have more Science has biotechnology which could help in the adaptation process. Think if human genomes are made adaptive of climate change. We will not need any other exogenic adaptive measures. Do we?

With these technologies used judiciously, we could change the entire hazard into gardens, where we could simultaneously run with the development and adapt climate change.

Challenges are big, fighting this demon named climate change means fighting nature with science! We must remember that, even a mistake at the nano level could risk the entire biosphere.

Conclusion

Climate change is crucial and at the same time is metaphysical to understand. But one thing is clear, that if we do not fight this reality, our countdown is on. Every single second we are moving towards a mass hazard. Make sure we have something in hand to fight those predicted situations.

References

"Uncertainty in resilience to climate change in India and Indian States" – Elizabeth L Malone, Antoinette L Brenkert (Climatic Change 91 (3-4), 451-476, 2008) link.springer.com

"An alternative approach for planning the resilient cities in developing countries" – Sameer Deshkar, YoshitsuguHayashia, Yasuhiro Mori (International Journal of Urban Sciences 15(1), 2011)

"From climate change impacts to adaptation: A development perspective for India" – Amit Garg, P R Shukla, Manmohan Kapshe (Natural Resources Forum) https://climate.grap.org/climate-risk-whitepaper/https://steemit.com/climatechange/

SCIENCE SHORE | PAGE 2

INFOGRAPHICS FOR THE SCIENTIFIC COMMUNITY

Dr SUJATHA

A picture is worth a thousand words. This old adage holds so much of value in the present era of big data where information graphics has become a powerful tool. Infographics is a collage of a few pictures and texts that concisely explain a topic. An infographic can break down complex data into simplified messages. A myriad of examples prove that infographics can show data, statistics, information and reports effectively. Data visualization is the hallmark of infographics which helps us to present our story in a crisp manner and carry information to the remotest regions of the world. Our brain is capable of storing visuals in long-term memory when compared to the text which enters working –memory.

The key features of infographics are; they are attractive, persuasive, easy to access and recall. It is believed that people retain 80% of what they see and do. This is the most convincing reason for people to use infographics to make an impact of their work and reach out to the right audience. The five key places where infographics is used are, Email marketing, website designing and blogging, canvassing in social media and compiling data in news reports. Infographics is mainly used for displaying a survey data, simplifying a complex mixture and raising awareness and comparing studies carried out by different groups.

What are the steps involved in making an infographic?

- 1. The prerequisite for making an infographic is to draw a sketch. The sketch should be divided into at least three main sections.
- 2. There should be a dominant image which draws the eye of the viewers, it should not be decorative but should project the theme of the topic.
- 3. A graph-Pie, bar, line chart instead of a typographic number.
- 4.A map; which locates the city or area.
- 5. An image- this can be a photo or a diagram or a timeline or a mind map.

The infographic should have a suitable heading, followed by a subheading; the sections have to be clearly explained by text messages. It is necessary to evenly space out an infographic. The below are the lists of some of the free online tools for laying out an infographic. These platforms help users to create their own infographics without having a prior experience as graphic designers.

They help the users to create a professional -grade infographics using some of their free templates.

Canva Data visual

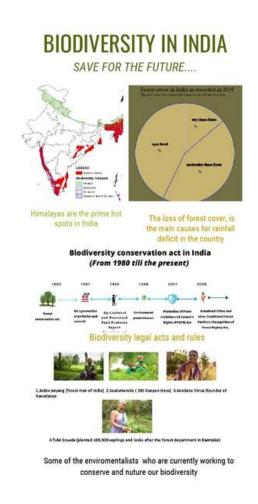
Infogra.am

Visme

Plotly

Dailyinfographics.com

Here is an infographic which I have created using the free software tool Canva, it is extremely user-friendly and offers many templates for free. A bit of exploration, can give wings to your creativity and make stunning infographics!



References

http://blogs.nature.com/ofschemes and memes/2014/01/20/the-power-of-using-infographics-to-communicate-science

https://blog.hubspot.com/agency/science-brains-crave-infographics

https://www.business2community.com/infographics/why-how-and-where-to-use-infographics-01407374

http://indiascience and technology. gov. in/listing page/government-boosts-rd-efforts-biodiversity-conservation

SCIENCE SHORE | PAGE 2

THE STORY OF CHEMISTRY PART-II

SUJATHA VARADARAJAN

Let me tell you an anecdote from my experience. Long-time back when I was a happy teacher, happy to cuddle the young little primary class children, I was suddenly asked to teach senior secondary classes. I was a little nervous and wondered to what inclination I will have to raise my head to see the tall students with this 5-foot height of mine. And that scared me.

Nonetheless, I was encouraged and was asked to give a demo session.

I was given a history substitution class to teach chemistry. Students were thrilled that the history teacher was absent. I entered the class and the students, as you may know, in that age group in their rebellious mood, were filling the room with a cacophony.

When they were told that I was going to teach chemistry the entire class roared in dismay. This was a little embarrassing moment for a teacher who has to now tactfully handle a class that was not interested in chemistry and simultaneously manage the pair of glaring eyes of senior teachers waiting to make judgment during this demo session.

I delicately managed by giving the students a challenge. I said, "Okay...I will not teach chemistry if you prove one item in the entire universe that is not related to chemistry in any way". They were very confident and accepted the challenge! The discussion went on for more than half an hour and finally, students admitted that, yes, chemistry prevails everywhere— the fan, the light, the clothes, the computers, and every nook and corner of the Universe that they could think of. I sighed a great relief, now I knew they were prepared to listen to me.

Yes, chemistry prevails everywhere. Let me now continue the story of chemistry.

Humans start their intellectual quest right from their infancy and in many cases, the aging process may stop this intellectual progress.

Can you suggest the one thing that supports the intellectual life for many of us?

Think it over while I proceed with part II.

One of the first milestones

One-way modern chemistry kept evolving is in the form of material chemistry. An inexpensive, environmentally friendly, and fully recyclable material became one of the best gifts to mankind by the chemical invention. Yes, you guessed it right. It is the invention of glass! What was discovered some 5000 years ago is now a part and parcel of everyday life. Window panes in big buildings, cutlery, shatterproof glasses in automobiles, gorilla glass in mobiles, and what not, its usage prevails all around.

The shatterproof glass was a serendipitous discovery. The story goes like this. One day Benedictus, a scientist, had to fetch something from the lab on the first floor while experimenting something. He was climbing the stairs with a conical flask in his hand. The flask fell from his hand and he rushed down. He found that the glass had developed cracks and did not shatter as expected. It was very intriguing to him. He asked his assistant who informed him that cellulose nitrate was stored in the flask. Cellulose nitrate had evaporated and a thin layer had formed. He did further experiments and discovered that a layer of cellulose nitrate when sandwiched between two layers of glass makes the glass shatterproof and that paved the way for its application in automobiles.



Shatterproof glass

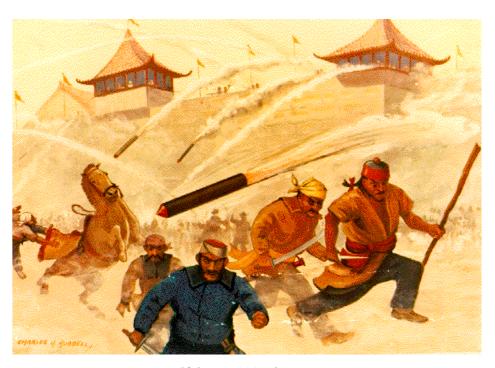
Now coming back, imagine how all those who need spectacles would have managed reading and writing without glass? No wonder, glass is the invention which seems to have supported the intellectual life of mankind.

Venice is known to have had several Glass Factories. Why?

Another interesting material that changed our lives is potassium nitrate. It was initially used for the medical purpose and a Chinese scientist was working with saltpetre i.e. potassium nitrate and tried to mix it with sulphur and charcoal.

And, it resulted in an explosion leading to a major fire in that house and the scientists too got badly burnt.

Ironically, what was thought to be useful for medical purposes for saving lives ended up in a warfare material taking away life-after-life. Chinese Monarch started using it to win the war against Mongols and later gunpowder founds its way to Europe through the silk route. People started to use it in cannons. To make it user-friendly, smaller pellet guns came into existence. And look, the number of pistol and gun users with and without a license is no more countable now.



Chinese Warfare

That's a sad story but let us move on to some positive life-supporting aspects of chemistry.

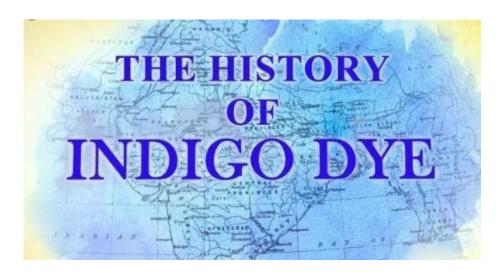
Modern biology is all about chemistry. Understanding life now has taken a turn to understand DNA and RNA. The sequencing of the amino acids, protein synthesis is all about a marriage between biology and chemistry. Through the research, we have come to know the important role of water in the formation of the double-helical structure of DNA. It is the hydrophobic forces that keep the strands intact otherwise the DNA and RNA cannot exist in a way to store information.

Understanding the synthesis and structure of the proteins within cells constitute cell biology. Mechanism of the working of enzymes through a complex system of the chemical system opens up another vast field of biochemistry.

Right from the days of latrochemistry, the role of chemistry in drug synthesis, pain management, inflammation management, diagnosis, and ailment has made chemistry an indispensable part of our life. Interaction of drugs with various molecular system constitutes the medicinal chemistry.

Shifting gears to fashion, clothing, and dyeing takes us to altogether a different world. Is the role of chemistry limited to just the synthesis of dyes? No, understanding the conditions under which the dyes would be taken up by a particular fabric is further interesting. The kind of chemical bonds that gets formed between a dye molecule and cloth fibre would decide whether the colour would be fast or not. Let me tell you the story of Indigo.

India was very famous for the Indigo dyes from time immemorial. Natural indigo was extracted from the plant Indigofera tictora. The leaves would be fermented overnight and then hydrolysed with an enzyme Indmulsin to give Indoxyl. Indoxyl on further oxidation gives indigo. While this process of synthesis was not only a source of income for the cultivators, it also brought come colours in the lives of people. And this became a lucrative business idea for the British when they were ruling India. The moment the thought of trading Indigo across continents crossed the minds of the British, it was not late when they gained the monopoly. Life brings self-checks and scientists began their efforts in the direction of chemical synthesis. Breakthrough was reached by the German chemist Von Baeyer. Indigo synthesis by him in the laboratory ended British monopoly.



https://www.youtube.com/watch?v=zt1b8ajcdbl

What was the reason for the Bengal Revolt in 1859?

Future with Chemistry

While some may condemn chemistry for the damage it potentially does to the people and environment (the recent Vizag gas leak, Bhopal gas tragedy etc.) leading to enormous fear amongst the common public, ironically, it is only chemistry that can solve many of the real-world problems. How?

Artificial photosynthesis

Have you heard about artificial photosynthesis? The plants are the best energy converters. Throughout our school life, we have studied that plants absorb sunlight and synthesize food. The chemistry goes like this. The water reacts with carbon dioxide to form carbohydrates. However, for meeting the human energy needs the hydrogen released by the photochemical decomposition of water has to be harnessed and stored. Scientists are trying to bio-mimic plants in producing hydrogen using the photochemical converters. That is the current area of research under artificial photosynthesis.

The future of food chemistry is all set to change. The way food needs to be preserved, packed, and transported needs a major change to transform the food industry.

It is said that in the future we will have the packing materials interact with the content for preservation. Besides, analytical tools for detecting the ever-present adulteration will become a vital area of chemical research.

Synthesis of the novel form of carbon like graphane and graphene will prove to be a game-changer claims Nobel laureate Hoffman. It will find its usage in almost all walks of life starting from medicines to electronics. One product that is bound to reach every household shortly is the graphene embedded sanitary pads. These sanitary pads are already in the market.

For a safer, cleaner, healthier, and easier life chemistry and research related to chemistry holds the answer. The various career options as chemists are: Analytical chemist, Chemical engineer, Forensic Scientist, Geochemist, Chemistry teacher, Hazardous Waste Chemist, Pharmacologist, Toxicologist, Water Chemist, Material Scientist etc.

Science and technology progress rapidly. This progress needs to be sustainable and ethical. Since chemistry has two faces to itself, not only scientists even a common man needs to take informed decisions to make the living comfortable not for just today but for the generations to come.

BE POSITIVE - SCIENCE BEHIND POSITIVITY

TOSHINI

Nizcaya means positiveness in Sanskrit and "Positif" in French for positive attitude that one must possess. Positive emotions serve as markers of flourishing. People who experience positive emotions exhibit unusual, flexible, creative, integrated, information-open-minded, and effective thinking patterns. Generally an emotion begins with an individual's assessment of the personal meaning of some antecedent event. This appraisal process maybe either conscious or unconscious, and it triggers a cascade of response tendencies manifest across loosely coupled component systems, such as subjective experience, facial expression, cognitive processing, and physiological changes.[1]

There are numerous experimental evidences available for marked association between positive psychological states and health outcomes including reduced cardiovascular disease risk and increased resistance to disease (immunity). It also states four main possibilities are accountable for positive attitude, the first is a common genetic substrate. Positive affect is moderately heritable. The second possibility is that lifestyle factors are responsible, with happy individuals having more favorable health habits and making healthier behavioral choices than less happy people. The third possible pathway is through psychobiological activation and variation in neuroendocrine, autonomic, immune, and inflammatory pathways. Finally, positive affect may be a marker of a broader set of psychosocial factors that are independently related to health, including social support, effective coping, optimism, and self-esteem. Positive thinking is directly linked to immune system, cardiovascular system. [2]

Positive attitude is also evident by increased physical activity than being sedentary. So, depending upon the intensity and depth curve of this attitude several physiological changes occurs within our body and ultimately end in cell formation / genetic constitution of an organism. Let us see how it happens!

Physiological controls of Positive emotions

At Protein level

Fibrinogen is a precursor of fibrin, one of the main constituents of vascular thrombi, but is also relevant to cardiovascular disease. Fibrinogen responds rapidly to mental stress an inverse association between positive affect and fibrinogen stress responsivity.[3]

At Hormone level

Cortisol profiles usually has diurnal ranges, examined. There is marked diurnal variation in cortisol, with high levels early in the day declining into the afternoon and evening. Most studies have shown lower cortisol in people with higher levels of positive affect. Cortisol declined as expected over the day, and output levels were again inversely associated with positive affect. [2]

In Brain

Positive emotions have a wide range of effects on cognitive processes. When positive thoughts are generated, when you are feeling happy, or optimistic, cortisol decreases and the brain produces serotonin, creating a feeling of well-being. Dopamine is also a neurotransmitter that helps control the brain's reward system and pleasure center. The part of the brain stretching from the ventral tegmental area in the middle of the brain to the nucleus accumbens at the front of the brain, has a huge concentration of dopamine receptors that make you feel pleasure. The hypothalamus is in charge of regulating how you respond to emotions. When excitement or fear causes your heart to beat faster, your blood pressure to rise and your breathing to quicken, it's the hypothalamus doing its job. The hippocampus turns your short-term memory into long-term memory and also helps you retrieve stored memory. Your memories inform how you respond to the world around you, including what your emotional responses are. [7]

Among Neurons

The neuronal substance dopamine in the midbrain directly affects people's emotions. A decreased dopamine levels are associated with stress or anxiety. On comparing the induced moderate positive emotions and neutral emotions resulted in increase in dopamine levels not only in the brain regions, but also in the peripheral blood circulation system. An increased concentration of dopamine in blood serum increases the production of immunity cells. [4]

In Immune cells

Telomerase activity is a predictor of long-term cellular viability especially in immune cell longevity, which increases with positive emotions.[5]

At each cellular level

Your thoughts program your cell.

Busy regions of the brain start making new connections with each other, and existing synapses, the connections between neurons, that experience more activity get stronger, increasingly sensitive, and start building more receptors. New synapses are also formed.

Here are thousands upon thousands of receptors on each cell in our body. Each receptor is specific to one peptide, or protein. When we have feelings of anger, sadness, guilt, excitement, happiness or nervousness, each separate emotion releases its own flurry of neuropeptides. Those peptides surge through the body and connect with those receptors which change the structure of each cell. Where this gets interesting is when the cells divide. If a cell has been exposed to a certain peptide more than others, the new cell that is produced through its division will have more of the receptor that matches with that specific peptide. Likewise, the cell will also have less receptors for peptides that its mother/sister cell was not exposed to as often.

If you have been bombarding your cells with peptides from negative thoughts, you are literally programming your cells to receive more of the same negative peptides in the future. What is even worse is that you're lessening the number of receptors of positive peptides on the cells, making yourself more inclined towards negativity. [6]

At Genetic Level

Your Thoughts Activate Your Genes.

Epigenetic field shows that we speak to our genes at every minute through our thoughts. Genes are switched on or off depending on your life experiences, and your genes and lifestyle form a feedback loop. What changes is your genetic activity, meaning the hundreds of proteins, enzymes, and other chemicals that regulate your cells. That leaves 95 percent of genes linked to disorders acting as an influencer, are your on-life factors. By changing your thoughts, you can influence and shape your own genetic readout. [6]

All the above process are physiological effects of positive emotions.

Psychologically speaking "The more we are emotionally calm and stable, the more we can reach peace". But to attain stability we need to have guilt free life, which will help to overcome unwanted egos, envies and initiate good self-analysis. Never desire for effortless living. To be calm we should maintain our caliber of values throughout our ups and downs. Anger! is also an important expression for human in today's world (otherwise we will be taken for granted) whose expressivity should be as a disciplined vent. Our emotions become our attitude and our attitude becomes our character. So, use the thoughts for self – beneficiary and self – development. We cannot control what has happened in the past, which shaped the brain we have today, and which programmed our cells, that caused certain genes to switch on. But your current positive belief can do many admirable possible changes on fore-coming generation of cells. So, stay healthy and "be positive".

References

- 1. Barbara L. Fredrickson University of Michigan The Role of Positive Emotions in Positive Psychology: The Broaden-and-Build Theory of Positive Emotions. Am Psychol. 2001 March; 56(3): 218–226.
- 2. Andrew Steptoe, Samantha Dockray, and Jane Wardle University College London. Positive Affect and Psychobiological Processes Relevant to Health. J Pers. 2009 December; 77(6): 1747–1776. doi:10.1111/j.1467-6494.2009.00599.
- 3. Danesh J, Collins R, Apple by P, Peto R. Association of fibrinogen, C-reactive protein, albumin, or leukocyte count with coronary heart disease: Meta-analyses of prospective studies. Journal of the American Medical Association. 1998; 279:1477–1482. [PubMed: 9600484]
- 4. Study on the progress of neural mechanism of positive emotions, School of Educational Science, Hengyang Normal University, Hengyang 421002, China Jie Yin. Translational Neuroscience 10 2019 93-98.
- 5. Intensive meditation training, immune cell telomerase activity, and psychological mediators. Psych neuroendocrinology Volume 36, Issue 5, June 2011, Pages 664-681.
- 6. How Your Thoughts Change Your Brain, Cells and Genes Every minute of every day, your body is physically reacting, literally changing, in response to the thoughts that run through your mind. By Debbie Hampton, Contributor hot yoga enthusiast, brain injury survivor 03/23/2016 10:56am EDT | Updated March 24, 2017.
- 7. 5 Ways Your Brain Influences Your Emotions. https://science.howstuffworks.com/life/inside-the-mind/human-brain/5-ways-your-brain-influences-your-emotions3.html.

SHORT STORIES & ARTICLES

ECOLOGICAL WATERLOO???

HEMA RAVI

World Wildlife Day proclaimed by the UN General Assembly on March 3, has reaffirmed the 2020 theme to be 'Sustaining all life on earth.' Despite continued talks on sustainable development at the global level, the ill-effects of plastics, rising temperatures, increased carbon footprint, polluted waters, and the consequential dwindling of several species is awfully distressing.

All around, hapless turtles have been dying in growing numbers after consuming plastic as they are unable to distinguish polymers from jelly fishes. Are they gradually vanishing to the brink of extinction? Such a thought is alarming, for, these amniotes have existed for over a million years, and have played a predominant role in maintaining the productive coral reef ecosystems by transporting essential nutrients from the deep seas to the coasts.

Never ever would Leo Baekeland have imagined that the 'plastic' would revolutionize the world in the most unbelievable manner for centuries to come, it did! At least, until it gradually dawned upon civilization that excessive dependence on polymers has caused loss of flora and fauna, poisoned the oceans, polluted the air, led to serious climate change globally; the cul-de-sac would eventually lead to human extinction!

The micro-plastics fragmented from larger particles are pollutants in the atmosphere and water, the air that we breathe is filled with impurities and pollutants. Multiple thoughts cloud our minds- anyway, the damage has been done, we are not facing much problems? What can be done now? Where do we begin?

From our homes, of course! By getting educated, empowering others to take the sure step. It is no harsh task to avoid single-use plastic, recycle, to reduce waste, mindfully purchase household necessities and gadgets - all of which would prove to be definite steps in mitigating water-pollutants and saving the sea-creatures from the brink of disaster.

Every conscious step towards this count will bring about the change for a better tomorrow.



OUR FRONT-LINE HEROES

JELLIE N. WYCKELSMA

The fight to survive is an ongoing process. From the moment of birth, we wish to live as many years as possible, often facing unexpected situations, which not only challenge us, but also can threaten our very existence. Then we discover there are people, who are willing to assist and to protect us, by going out of their way, and often placing their own life in danger too. They appear to be just ordinary men and women, just like ourselves, but they display true empathy towards fellowmen, and the need to always unselfishly come to someone's aid. They perform heroic deeds, yet never boast about their achievements, but humbly carry on.

When natural disasters strike, it is these often unsung heroes who can be found at the front-line of dangerous situations. After an earthquake has struck, it is the men who search for survivors, while around them the buildings are still crumbling. When floods inundate the land, it is the helicopter pilot who rescues people perched on rooftops, or hanging onto branches of trees, or trapped on a small piece of land, surrounded by raging torrents. Sometimes pilots brave storms when dropping a lifeline to winch up a sailor clinging to a sinking ship.

When in the heat of summer wild fires ravage the arid land, and firestorms fan more fires all over, it is the volunteer firefighter who bravely battles the flames, trying to save people and their properties. In summer we also see the volunteer lifesaver at the beach, who rescues swimmers, who swam in deeper waters and were swept out to sea, while only too aware how dangerous rips and currents are. During wars there is always one soldier, who is just a little braver than the others, when he ignores his own safety and rescues a wounded fellow soldier, or saves a lost child, away from the war zone.

Last but not least are the doctors, surgeons and nurses who do their utmost to save lives, when dangerous, contagious viruses are rampant in the community, ignoring the fact that they too could become infected, and seriously ill themselves, yet holding the patient's well-being before their own ...

For all these Front-line Heroes we can only have the greatest respect they deserve, and must support and stand by them, if they would need help.



TIME...

JELLIE N. WYCKELSMA

Perhaps she should have listened to the advice all had given her. Even with very few stops for a rest, the journey might take her four to five days to reach her final destination.

"Take the highway it will save you time."

Time, she had thought, I've got plenty of time. It wasn't the essence of her life any longer. She had been ruled by time all her life. Time, she now pondered. What does it mean? What was time anyway but an invention of man; a guide to put all our activities, events and other happenings in some sort of order.

The true answer was no longer found in the path of the sun, the orbit of the moon, or the stars. Man liked to classify, to put everything in its right place; time being one of them. Numbers have become the favourite toy. Once established a numerical order, time was divided by seconds, minutes, hours, days, weeks, years

Her mind was ticking over and she wondered whether she should go on? Time became attached to her daily life, enslaved her. Yet, she too had recognised that the clock, an instrument to indicate, to keep, and to co-ordinate time was one of the oldest human inventions.

She pictured how calendars were designed and together with the clocks and watches now constantly showed her what day she had entered, and what time of the day it was. She had an alarm clock that woke her from a natural sleep. At sports events she had observed the stopwatches and other timing devices that record time in hundreds even thousands of seconds. So obsessed with time all have become, that allowed participants in a race to win by 1/1000 of a second? Equal winners no longer an option.

She had sighed and fascinated by the theme, her mind continued along the track of time. She thought how Grandfathers' clocks often chimed at the full hour, but also sometimes at the half and quarterly hour, and how a few churches still had a carillon that rang to summon parishioners that it was time to attend church.



Like everybody she too would constantly watch time to assure herself how much time she could use to perform a task. How much time she would need to get somewhere on time. Time has become precious to her. Time has invaded her language too. Time is money and Time waits for no man, quotes she had often used.

Since her clocks and watches had become digital; the second and minute hands were gone, leaving only numbers. Even the sound of time was replaced by an inaudible beep, from one second to the next. She had digital clocks on her oven, microwave oven, air conditioners, radio and television set, computer, mobile phone, and on the dashboard of her car.

She had counted the number of watches and clocks that needed re-adjusting when daylight saving time told her that we have entered the summertime zone and revert back one hour in autumn, when the latter becomes the only time in her life that allowed her to "Turn back the clock" to "Go back in time". She once counted the times she had looked at her bare wrist on a day that she had forgotten to wear a watch!

How lucky animals were. To animals in the wild time was an unknown quantity. They have no conception of time. They totally relied upon nature, on the seasons. They ate when hungry, drank when thirsty, they slept when tired, they fought when threatened, and they mated when in heat. Theirs was the simple life in its primitive form; healthy without the constraints of time, without man induced stress. It were the domesticated animals that recognise a certain routine, perhaps their interpretation of time, she asked herself.

Despite all the addiction to time, it remained a relative concept. When she was in pain it felt like it was never going to end and when elated, it was gone in one second.

She wondered how she would experience the last five minutes of her life. She imagined that she would see her life flashing past. She might recall all the good things she had done, goals reached, but also ill-fated actions and projects which in hindsight she should have abandoned. And then she hoped that there would be a parade of the people she had met. The wonderful, the weird and the outright wicked, the amazing, courageous and saintly ones, the domineering, and also the bossy and dictatorial persons, which she had tried to avoid at all cost. Then there were those who had spread a magical spell and made life a fairy tale, which lasted long enough to be engulfed in a feeling of euphoria for a little while. Hopefully she

SCIENCE SHORE PAGE 4

would also see people who she had admired, and who inspired her to become a better person.

'Perhaps I should have listened,' she said aloud as she pulled over to the side of the road and stopped the car. 'I should have continued along the highway. It would have saved me a little time ... '

AUTOBIOGRAPHY OF THE UGLY DUCKLING

Rtd. Prof. LATHA PREM SAKHYA

"A swan, I am", I shouted as I swam round and round in sheer happiness as the others swam around me in joy and approbation. How much I had suffered! How much I had yearned for such a day!

The day I was born, I remember vividly. My mother was moody. I had taken a week more to hatch and my siblings wandered on their own, often coming to sit under my mother's wings when tired. They wanted their mother badly. Mother too was feeling tired I think because she shuffled a lot as she sat on me. She must have longed to have a cooling swim for a long time. Her friend the big fat brown hen had called her a fool and had ascertained that it was a turkey's egg. But she didn't have the heart to leave the egg unhatched. When finally after a week when it cracked out, an ungainly little creature resembling neither a duck or a goose or a turkey sprang out. A sight not pleasing to my mother. She had to test to find out whether it was a turkey so she called up my siblings and rushed off to the nearby pond. I ran behind them on my wobbly feet. Plop, plop they took to water. I too without hesitation followed them. Mamma was assured that I was her own though I was bigger than her duckling and quite ugly. Life at the farm was hell for me. Everyone who had a mouth or a beak tormented me. What hurt me most was the taunts of my siblings and the indifference of my mamma. One day I ran away.

It was a frightful adventure. Through marshes and fields I travelled feeding on maggots, tiny tadpoles and insects. In one place I thought I would be trampled upon by the hunters or killed by the hunting dogs. A geese hunt was going on. I hid in a thicket and watched. And a huge dog came towards me. I closed my eyes and crouched. But he went off. I felt sad, even the dogs ignored me because of my ugliness. When the hunters retired with their dogs carrying away their game I slowly emerged. I felt relieved. It was a wild, dangerous life but I felt happy. There was only one thing I missed and that was companionship and I longed for someone who would understand me and accept me. One day as I was swimming in the pond, two strange birds with white feathers and graceful necks landed on the water and started swimming in great glee. I hid among the reeds and watched the beauties and longed to be like them. In the evening they flew away.

As twilight was falling, the weather turned stormy. I knew I must find shelter. I walked and walked, hardly seeing anything. Then I saw a light not far off. I made a beeline towards it. It was a small house. Through the door ajar I saw an old woman sewing. I entered and I was accosted by a hen and a cat. "Don't hurt it", the woman ordered so they retreated and I ran to the nearest corner and sat there. I was tired and my little feet were hurting, tomorrow will be a better day and on that note I dozed off. When I woke up I heard a cock crowing and I knew I was somewhere near a farm. I saw the cat and the hen eyeing me with spite. They wanted me to follow their lifestyle and live according to their instructions. For a few days I managed. They were bullies too and wouldn't give me peace. How could I live like them? But there was safety. Besides, the old woman found out that I was not a duck so naturally she was not going to get the eggs she was waiting for. One day she grumbled about feeding useless creatures. I felt sad. I didn't want to trouble them. The cat and the hen hated me. They had also warned that unless I conform to their way of living and forget about swimming I cannot stay there. Deep inside I knew I can't ever live a cat's life or a hen's life. My life was not this, it was in the fields and the open air. So one day I ran away from there, the cat and the hen becoming unbearable for me.

I ran and ran and my feet hurt. I came to a beautiful pond. I swam and swam until I felt at peace with myself and I decided to stay by its side. Days passed into weeks and months. It was almost autumn. One evening while lazily swimming around I saw three white birds land on the water gracefully. They swam, bathed and flapped their graceful wings as white as snow. Their beauty enchanted me. I vainly wished I were like that.

I didn't go near them for fear of being chased away. When it was almost twilight they flew away. I aspired to be like them when I grew up. Again days passed by, I kept a lookout for those lovely creatures they never came back. Then winter came. I found no place to shelter, it was a harsh winter. I was feeling the cold badly and slowly my body grew numb and frozen. Then I knew nothing, when I opened my eyes, I was in a new world. I was kept in a shed along with other birds. Later I understood that I was in a large farm. The farmer had found me almost dead and frozen, he took me to the farm and revived me.

I had food and a cosy home and a lot of companions. But no one liked me for my strangeness. And here too everyone hurt me. They found me big and ugly. And I couldn't do anything properly. Scared of the two naughty children in the farm house I would try to hide in the kitchen and topple down everything which irritated the farmer's wife. Finally she was also tired of me and the last straw was my upsetting a pail of fresh milk.

It happened like this. One day I was going out to the yard, when the children came out of their house. They saw me and chased me all over the place. To escape from them I entered the kitchen, when the children started hooting, I started flying around in fear and knocked down a pail of milk. The frightened children ran off when their mother came, she saw the spilled milk and became furious. She took a broomstick and came after me. I ran out of the door into the yard then I knew I couldn't stay there. So half flying half walking I ran away from there too. The winter was just giving way to spring. Snow had started to melt and I could see small plants shooting up here and there. Within a few days spring would be there. I walked and walked and came upon a small pool in the middle of a thick wood. I decided to stay somewhere there because I loved swimming. Life became normal for me. I was almost happy but for no companions. I yearned for friends. All the birds I met were indifferent to me.

One spring morning I was swimming in the pond enjoying the sun. Hearing a flapping sound I looked around and saw three graceful birds landing smoothly on the water. They looked like the birds I had seen and aspired to be. Frightened of rejection I tried to hide, but seeing me they came and swam around me joyfully. I was bewildered. I realized they were very happy to see me. Never in my life had anyone done like this to me. I was frightened. I started to duck my head and swim away under the water. To my surprise I saw a bird like those birds in the water looking back at me with a puzzled look. It took some time for me to realize that it was indeed me and the realization that I was like them slowly registered. And I swam around crazily, in great joy followed by them. Soon I learned that they were swans, one of the most graceful and beautiful birds on earth, loved and admired by all. My happiness knew no bounds. For everything I suffered I was doubly rewarded. I could communicate with them easily. In the evening when they got ready to fly off they invited me too and I flew away joyfully to enjoy love and companionship in lands strange to me with my own kin.

(An adaptation of Hans Christian Andersen's story 'The Ugly Duckling'.)



SCIENCE SHORE PAGE 4

REACHING OUT TO BROKEN SOULS...

MADHUMATHI H

Until it happens to oneself, taking others' pain for granted is one of the cruel, and cold behaviours one can exhibit!

Life need not teach us everything through our own experiences. When we see someone suffer, physically, mentally, or emotionally, it is a humane responsibility to make efforts in healing them, doing our best! There are a lot of souls suffering helplessly, hesitant to ask for help mainly for the fear of being taken for granted/looked down on...

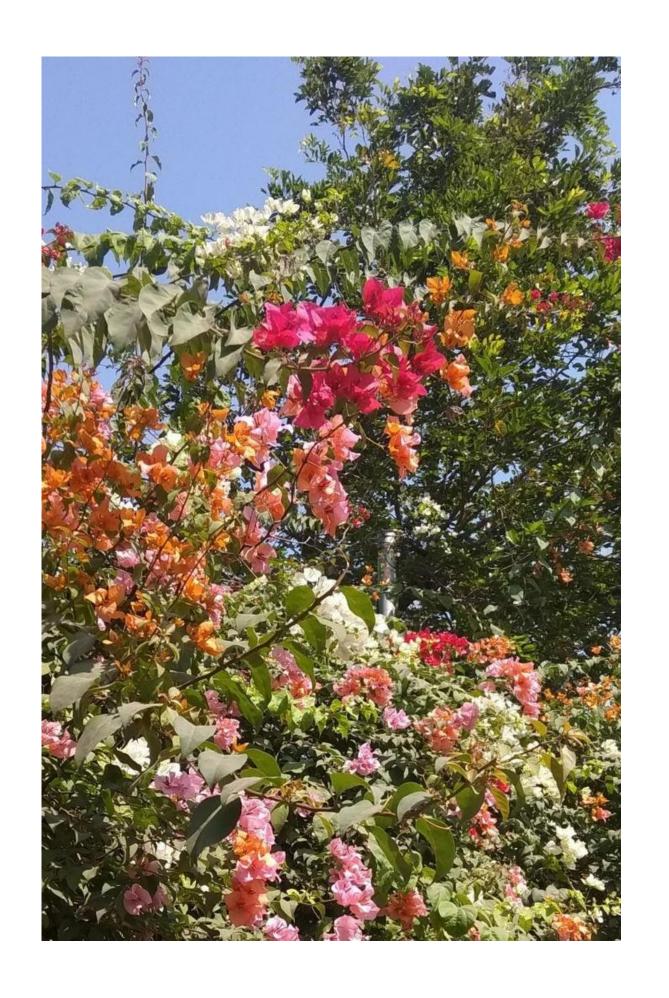
Above all, people hesitate to shed tears! Such inhibitions!

Crying, and tears are in fact a kind of catharsis, a deep healing, and tears are in no way a sign of weakness! Irrespective of gender. Tears reflect the genuine raw chambers of the soul!

REACHING OUT whenever possible, to people who long for a vent, deeply suffocated by accumulated unexpressed emotions and pain, is an essential act of humaneness, contributing a tiny bit to make the world a better place to live. Making people experience healing.

Empathy, compassion, being a kind trustworthy shoulder, listening earnestly, making someone feel better, stronger, and braver... - all these are the gifts we can humbly give to the world, to the people around as often as possible! For when we leave, it is the heartprints that would be remembered; all else evaporates...

Let us give more. Be there. Gift love.



INTRIGUING HOUSE SPARROWS

T S MANOHAR

The report on the fast dwindling population of the once ubiquitous house sparrow raised concern in our household. Endowed with a garden with the attendant foliage and greenery, we decided to work towards its conservation. Placing a clean bowl of water and spreading some food grains religiously everyday brought the desired results. Now we are delighted to have twenty or more of them inhabiting our place, chirping, bathing and pecking on the grains. They share space with other warblers, garden lizards, butterflies, crows and the furry squirrels with gay abandon. Sensing imminent danger they take off vertically in one swoosh with remarkable alertness.

One afternoon, observing intently, I found them pecking at worms, beetles, spiders and tiny insects on the plants. They seemed to 'care two hoots' to the grains on the ground. I am aware that these winged wonders are omnivorous but their choice bemused me. Some months later too, I found the sparrows darting in and out of a multigrain warehouse not with grains but with worms that attack these grains in their beak. Overwhelmed by curiosity of this observation, I chanced to clarify with an ornithologist.

With a wink of his eyes he said, "That's elementary Mr. Manohar! Given a multi cuisine spread, I would rather go for the knife and fork by default, than have lettuce, lentils, soups, salads and the veritable vegetarian fare".

Turning serious he continued, "Indeed the majority of times they feed on grains but to nourish their young ones with proteins, precisely why, they peck at worms and insects. In short, they are omnivorous by habit – vegetarians by compulsions and flesh eaters by choice".

Rest assured and convinced, I continue to feed and let them have their pick.



FORGETTING TO REMEMBER

T S MANOHAR

With the advent of the latest gadgets, people no longer need to remember the dates, events, facts and figures. With a single touch of the button, one can retrieve the required data in a trice. Once activated, these gizmos take care of the reminders and alarms. Nowadays, people look into the memory capacity of their mobile phones in mega, giga and terra bytes! They place more faith on the gadget than their own God given faculty which has Ultra byte! Often times, we find the receive, register and recall function of the brain has taken a back seat. Personally, I am guilty of being a slave to these hand held contraptions and I consciously did not cultivate the habit of greeting my friends, colleagues and relatives on their anniversaries. Given the impact it delivers on the recipient, I rue that it has been a cardinal mistake on my part in relationship management.

Having been brought up in a middle class household, birth anniversary was never a celebration. My mother used to take me to a nearby temple for a simple prayer and we were done with that. My date of birth got reiterated in my memory filling up several application forms, over time.

Soon after marriage it did not take long for my wife to find out that I was wedded more to my office than to her. Despite my balancing act, I could not meet her expectations on the entertainment front. Also, being the only child and daughter, she was pampered in her growing years. I still vividly remember the words of my father-in-law as we boarded the train after the wedding.

"My daughter is very delicate and sensitive girl. Please handle with care". Soon enough I experienced the import of that statement.

It was 30th of January and a Friday. The traders had called for a hartal and the city saw a closure of shops, malls, hotels and cinema theatres. Reaching home at 8 p.m. I encountered my wife at the drawing room, well dressed up and waiting for me.

She casually queried,

"What day is today?"

"Why? Friday", I replied my mind still preoccupied on some office issue.

"Date?" she continued calmly.

"30th Jan" I said in a hurry and rushed for a shower.

Back from my bath I found her locked up in the bed room. Just then the telephone rang and I hurried to pick up. It was my cousin calling from Pune. "Sorry bro, today is Sudha's birthday, isn't it? I had totally forgotten. Anyway, better late than never I thought. Could you put her on line, please?" She said.

Alarm bells started ringing in my head. I had done the unpardonable. Found guilty under section xyz of the MPC (Marital Penal Code).

A make or break situation. My grey matter went on over drive. Damage control exercise began. I tried to reach for my mobile. I realized that I had left it in the car. Trying to retrieve it I stumbled on the gift pack intended for my lady boss leaving the bank for good. "To hell with her", I told myself. This hunted treasure was something more urgent and important now. I collected myself in an instant and things started falling in place immediately. Thanking my stars for their benevolence I placed the gift in her hands gently. My effective communication came to the fore. "I know honey it is your birthday. How can I ever forget it? I was just feigning ignorance, you see. Dear, this pack contains the choicest pearl set ideal for your swan neck. You will look gorgeous with that deep blue sari to match this", I reeled off. From her look I could sense she had bought the story. The last sentence had done the trick, probably. She smiled much to my relief. Continuing in the same pace, I said "In fact I had planned for a dinner tonight. But this hartal you see, has played spoil sport. Anyway, we will dine out tomorrow for sure".

From that instant even Jan 26th or Aug 15th may not be relevant to me. But 30th Jan will and forever be etched in my memory.

When I shared this with my friend he laughed out loud and said, "So, to remember your wife's birthday, you had to forget it once, eh?"



THE SUBSTANCE OF A THOUGHT

ORBINDU GANGA

The creativity of nature can be sensed by its creation. The veracity with which nature created the beings can be attributed to the foresightedness. Being meticulous to design the anatomy and physiology of different species requires proper inner engineering. The thought process involved in such a creation should be intuitive when the precursor is never existing for a new creation to design. How many times should have nature thought of a design to create silhouette within self to create the anatomy of different species? To have the thought process of such a design, a creator should have a deep insight into the idea of creation. An idea of creation involves a thought process where the thought becomes the precursor for the whole end product. But are the thoughts the signs of reality? Nature was able to design the way she wanted her creations to be. One of her creations is the human where his thoughts couldn't produce the desired results. One could also argue that there were enough aberrations in the creation of humans to make the argument that her creations were not entirely successful. On the contrary, one cannot find flaws in the creations since the designs were well functional in the beginning but with the interference of the human, the flow in the designs was destroyed.

Thoughts are always flowing, never to be clogged. A thought is never complete, it is a broken fragment that is in the form of an array of clustered fragments. Such fragments are in millions which can never be joined together with human computational skills. The time we realise to think about the thought it would have escaped from us. The way the thought travels is significant concerning the flow of it. One may argue that thought gives us time to think and comprehend the idea of the thought but the whole thought process involved is cumbersome. Since the time is taken for thought from ricocheting within to the mind to read takes relatively lesser time it becomes difficult to unfold the code.

Each thought is differentiated from one another having a unique locus independent of each other which is difficult to trace. Thoughts are moving faster than we would have ever imagined. They ricochet the curves and stay temporarily for seconds and disappear immediately before we could think about it. They leave no trace since they are temporarily staying and disappearing at will. The origin of the fragments is abstruse. The inception and denouement of thought are onerous to trace since the whole mechanism is not well understood.

The thoughts are formed from the memories, to have imbibed from the events or situations seen, listened, or touched. The derivation of thought from the memory to the realisation of thought in our conscience needs more clarity. In this whole process, we would be able to understand the inception of a thought. When we can trace the substratum, the basis for the substance can be perceived. Thought as a substance with its constituents and attributes can be deciphered with the substratum.

Each time a thought touches our conscience, we are trying to delve deeper into it. But we are unable to produce the same kind of results for each thought. Some thoughts can produce the result which is analysed and planned by us while others are either unable to proceed further or remain stagnant. To make thought as the precursor to derive into the end product may not be true. Each thought doesn't result in the desired result. Thoughts have been an interesting area of study linked with subjects like linguistics, psychology, neuroscience, and spirituality. Understanding of thought requires more research to derive at a definite conclusion on various facets of thought. As you explore the world, many hidden secrets are revealed. I hope we would be able to decode the inner dynamics of thought in the future.



THE HAZARDOUS IMPACT OF JUNK FOOD IN OUR DAILY LIFE

PARVATHI

My article is about hazardous effect of junk food in our daily lives.

It is said that people are becoming increasingly overweight by consuming junk food. So ,we shall discuss what is junk food, the dangerous impact of junk food in our daily lives ,reasons for abundant availability of junk food and the measures to be taken to reduce the consumption. So before we go ahead first let me ask you, what is called junk food? "Junk food is something that remains few moments on liftorever in hips".

Junk food or fast food are food items that are quickly prepared, rich in taste, pool in nutrients etc. Items such as Burger, Pizza, Pasta, Pani Puri, instant noodles like Top ramen, Maggi etc.

The items mentioned are glittery, unhealthy and upon regular consumption of the above items we not only become obese but also are prone to other types of diseases such as heart issues, sugar, cancer etc. Unlike healthy foods, there are zero amount of protein, vitamins, minerals associated with junk foods it contains unhealthy amounts of fats, sugar etc.

Now let us discuss the reasons for the increase in junk food.

Advertisement

Well it is a well known fact that advertisements play a major role in enhancing the success of the product. Be it traditional marketing or the newly trending social media marketing. Junk food advertisers have their own unique way in expanding business through advertisement to attract people.

Junk food outlets like KFC, Burger king, MC Donald endorse a full page advertisement in leading newspapers with drooling pictures, attractive offers & catchy slogans thus tempting the readers to gorge on their favourite items.

Apart from the above mentioned advertising methods junk food outlets & junk food producers also advertise and market their products on social media like Instagram, Face book etc.

They offer prime space to the endorsers to endorse their products. Junk food companies make optimum use of the space provided to them and advertise their products outlets in such a way that advertisement does not go unnoticed.

Marketing

Marketing is yet another vital tool in enhancing the company's productivity. Proper and strategic marketing is one of the first and prime reasons for the grand success of a product.

First method of marketing is done by paying a whopping amount of money to the most famous celebrities to endorse their products.

The second method of Marketing is through outlets like MC Donalds, Burger King, offers toys, gifts to the innocent children each time upon visiting them. Upon gifting /bribing the children they get carried away and end up visiting their outlets frequently.

Availablity & convenience

Junk food is something that is easily available in the market and also convenient to cook. All of us living a busy life and being held up in the rat race have no time for healthy cooking or to lead a healthy lifestyle so they opt for quick fix foods such as Pasta, Instant noodles, cup noodles (Something that can be cooked in a jiffy by adding hot water), bread toppings such as Pillsbury choco spread, Nutella choco spread being available easily people no longer feel the urge to cook and thus make use of the above mentioned food items.

Having discussed the reasons on the increase in the consumption of junk food .Let us discuss the ways to reduce the consumption of junk food.

Attitude to be fit

Well both men & women crave for a beautiful, toned physique and it is definitely our dream to have a beautiful body and that dream can be fulfilled only by eradicating junk food from our diet. Upon eradicating junk food from our diet we are sure to make our dreams come true by having a toned beautiful body.

Watch what you eat

Well the sense of hunger is not only felt on our growling tummy but also on our mouth. And that is reason why most often the mouth is hungry than the tummy. Not every time we satiate our hunger pangs we also eat to kill boredom, depression etc. So we as matured individuals should watch what we eat and ensure that we eat the right food, at the right time. It is first our stomach that has to be given importance and next is our mouth.

Water intake

"Water is the elixir of life" - Sir C.V,Raman.

It is natural for human beings to sip their favourite sweetened carbonated drinks especially during summer thinking those sweetened drinks shall provide the much needed respite, relaxation, rejuvenation etc. But the bitter truth is those sweetened carbonated drinks does not actually quench your thirst indeed they make your more sick &unhealthy in the long run. It is pure good water which quenches our thirst and make us feel relaxed and refreshing. So whenever you feel thirsty please ditch those poisonous, hazardous, cool drinks and switch to plain pure water.

Adding lime juice to plain, pure drinking water shall be a perfect summer detox drink and also an energy drink.

Switch to healthy food

It is not only junk food and sweetened carbonated drinks that are easily available there are also many healthy food such as protein bars, protein shakes, fibre biscuits etc which are available easily. These items can be consumed on a daily basis for a healthy happy life ahead.

Self cooking

"Cooking is one of the greatest gift you can give to those you love"

Cooking is not only about the taste of food it is also about the items that are cooked. Apart from cooking junk food let us learn to cook nutritious healthy food for ourselves and for people around us. Upon doing so, we as an individual and also people eat healthy nutritious food.

"All the glitters is not gold". But when it comes to junk food I would rather put it as "Not all that are tasty are healthy". For example let us take the example of Maggi. Maggi is a very renowned product of the age old company Nestle, Maggi a very mandatory product in all household and it comes with two catchy slogans.

"Fast to cook, good to eat", "Taste bhi health bhi."

Well the above mentioned slogans are true to an extent it is definitely fast to cook but not good to eat. It is tasty but not healthy it is misguiding, misleading. It is made up of lead, maida and other harmful ingredients.

Let us take another products called McCain. McCain has varied ready to eat junk foods products such as finger chips, potato fries, patties, smiley ,potato nuggets etc and other non vegetarian products are very easy to make but as discussed earlier are very hazardous.

Kindly find the below details.

Fried chicken: Steroids, arsenic can cause the risk of cancer

Instant noodles: Content same as Plaster of paris 3-5 years of eating may lead to kidney problems

Soft drinks: Obesity, osteoporosis, tooth decay, diabetes

Processed meats: Processed meats can cause leukemia

As we all are living a sedentary lifestyle with huge pressure to win over the rat race let us not make it more complicated by eating unhealthy processed foods which damages both mind and body.

Life is lived only once and is short, uncertain. Until our last day on our journey of life, Let us live happily and do the needful to live a healthy life ahead.

Please remember, out of all the priceless assets of a man, health is one of the first, important asset to possess.

So from today onwards let us all take a pledge and say no to all types of unhealthy, poisonous and hazardous food and say yes to good and healthy food.

"LET US EAT TO LIVE AND NOT LIVE TO EAT".



THE ECONOMICS OF HIGHER EDUCATION IN INDIA

Dr S PADMAPRIYA

The World Bank defines Tertiary education (further education plus higher education) as including universities and institutions that teach specific capacities of higher learning such as colleges, technical training institutes, community colleges, nursing schools, research laboratories, centres of excellence and distance learning centres. Tertiary education at non-degree level is known as further education. In India, as is the prevalent custom in many other countries, the term 'Higher education' does not include further education. Higher education also known as post-secondary education include undergraduate and postgraduate education, which culminates in the awarding of a degree. Higher education does not include vocational education.

India is a highly populous country of over 1.3 billion people. India with 356 million young people in 2014{United Nations Report, 2014} is the country with the world's largest youth population. The population in the age group of 15 years to 34 years increased to 430 million in 2011 according to the National Statistical Commission Report on Youth of India published in 2017. India's higher education system is the third largest in the world, next to the United States and China. Education being an essential part of Human Development is crucial to ensuring the continuous development of our nation in all fields because the scholars of today are the future job creators and job seekers in their respective fields. The success of a nation depends to a large extent on the success of the education system of the nation; specifically the higher education system. The Higher Education of a nation is an essential aspect of Human Capital formation and also has a great bearing on the employability of the youth of a nation.

The main governing body at the tertiary level is the UGC. The University Grants Commission (UGC), a statutory body set up by the Indian Union government in accordance to the UGC Act 1956 under Ministry of Human Resource Development, is charged with coordination, determination and maintenance of standards of higher education. It provides recognition to universities and colleges in India, and disburses funds to them. As of 2016, India has 44 central universities, 540 state universities, 122 deemed universities, 90 private universities, 5 institutions established and functioning under the State Act and 75 Institutes of National Importance including AIIMS', IITS, IIEST and NIT'S – a total of 799 universities.

Other institutions include 39,071 colleges as Government Degree Colleges and Private Degree Colleges, which includes 1800 exclusive women's colleges, functioning under these universities and institutions as reported by the UGC in 2016. Universities in India have evolved in divergent streams with each stream monitored by an apex body, indirectly controlled by the Ministry of Human Resource Development and funded jointly by the state governments. Most universities are administered by the States, however, there are important universities called Central Universities, which are maintained by the Union Government. Thus, the increased funding of the central universities gives them an advantage over their state competitors.

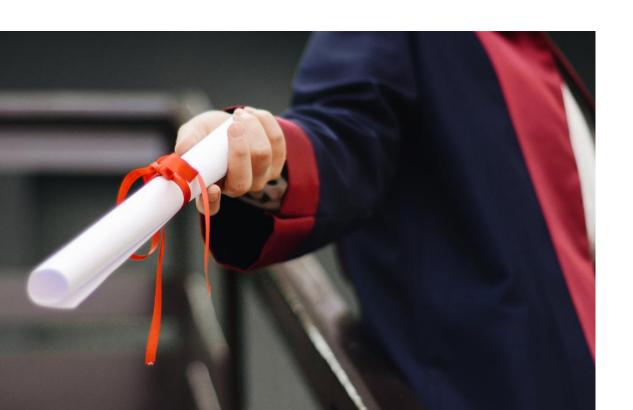
Several hundred state universities and research institutions provide opportunities for advanced learning and research leading up to a PhD in branches of science, technology and agriculture. 25 of these institutions come under the umbrella of the CSIR - Council of Scientific and Industrial Research and over 60 come under the ICAR - Indian Council of Agricultural Research. In addition, the DAE - Department of Atomic Energy, and other ministries support various research laboratories. The National Institute of Technology (NITs), Indian Institutes of Information Technology (IIITs), Indian Institutes of Technology and the Indian Institute of Science are the most prestigious institutions in the fields of science and technology.

The private sector is vibrant and strong in the field of higher education in India and it contribution is undeniable and exceptional. The Competition between the government and private players in the field of higher education has led to improved quality in the field of higher education and the incorporation of the best practices of the education sector.

The total allocation for higher education in the budget 2013-14 was a little over Rs.16, 000 crores, which includes technical education. In terms of Central Budgetary Allocation, the department of Higher Education was allotted Rs 25,399 crores for the year 2015-16 while it was Rs 28,840 crores for the year 2016-17. Also, the Finance Ministry announced the creation of a Higher Education Financing Agency, with an initial capital base of Rs.1000 crores, which will leverage funds from the market and work to create infrastructure in India's top institution like IIT's. Budget 2020 has allocated Rs 39, 466.52 crores for Department of Higher Education. Thus, there has been a reasonable increase in the budgetary allocation for higher education in India. Thus, over the years, more funds have been allocated to the education sector.

It is extremely important to use the funds in an intelligent manner by concentrating on technology enabled education, research and to teach skills to the youth in a manner suitable to improving their employability and productivity. Higher education must include soft skills' training for the youth. Emphasis should be on access, equity and quality of higher education.

The youth of today is the future for the country. Higher Education in India is of high strategic importance to the development of India and investments in the same will lead to multiple benefits, both direct and indirect to the economy, polity and social structure of the country.



SCIENCE SHORE PAGE 5

TOTAL LOCKDOWN FOR 21 DAYS

PRASANNA S



It is the right decision to minimise the threat of this deadly virus and it's impact. It is only a matter of days and hopefully it will all be over", but will it, though? When only a portion of the entire population can afford to sit at home shunning the contact with the outside world to protect themselves and the others, while the rest are either working to provide the basic necessities and comfort to those people or fleeing the cities to be with their families, it doesn't do any justice. There are 2 instances which became the talk of the month in the time of crisis in the country. The Indian employees/ workers/students living abroad flying back home. The people rushing back home to their native place leaving the cities. What do they all have in common? They wanted to reach HOME. A safe haven against all this confusion. A person flying back home even when there is a high chance that he/she might be carrying the infection or the same person leaving the city he/she worked in just so they can reach home for a security of food or home. Here we were calling names and pointing fingers? In the whole process of shutting ourselves comfortably, we failed to look at the underbelly of the city. The blue collar workers, daily wagers, people from unorganised sectors who make sure that your daily needs, facilities, comfort doesn't reduce at any cost. They don't get paid holidays or work from home option. They do have a home maybe in the city or a town or village or no where at all. They could not rush back home to quarantine themselves like the rest of us. A mere celebration rally or clapping our hands for a said amount of time or Poojas and other religious rituals are not going to magically pay them off. Would they have left for their homes if they had a chance? Do they really have that choice? How can we find a way to make their lives a little easier? These are the questions we need to be asking ourselves.

A homeless person or a daily wager looking for work in shops or construction sites that are shut down or a street vendor in the empty locked down roads does not have the benefits that a financially stable person has. They don't have money to feed their own families. Opening up of shops with essential goods but most people don't have the money to buy essential goods like food – the irony at its finest. A family dependent on a monthly salary is not equipped to manage through the lockdown. All the loans and EMIs will weigh them down more in times like these. Even the major announcement about taxes and economic benefits after the lock down are sadly in favour of the already sustaining and stable sect of the country. Proper measures and benefits are to be initiated for the vulnerable part of the society who is prone to chaos and confusion every single time at times like these.

In a way a disease that was spread mostly by the rich and affluent is affecting the not so affluent and those who can't afford to be home or don't have a home at all. To keep in check the welfare of the people who literally build and maintain the safety and integrity of the rest of us, to give the people a platform to make a choice about their safety and security is of utmost importance regardless of a pandemic. Also a major underlying issue is casterising medical professionals and nurses and calling the north east Indians as corona virus. What it shows is our underlying bias? Isn't it?

Another panic move is the hoarding of essential medical goods. The shortage of surgical masks, gloves and other such important products/medicine and some medicines which are prescribed for front line medical professional etc., makes it difficult for the people with medical needs, chronic illness, immuno compromised, those who need dialysis and chemo, etc. This is a self-centric move which shows how drifted apart we are in a collective society. We need proper awareness and research when it comes to believing the rumors or false news about the infection or any ongoing situations in this time. On the other side, people from all over the world are realizing and accepting that the contributions of economically weaker section of the society and their quality of lives. We are able to be at ease in our homes because someone is working to provide the electricity, water supply and other essential services we require. The need to localize economy is strongly felt local products, local produce and local markets. The idea of work from home opened a previously denied opportunity for differently abled (there are many instances where that was given as a reason to deny a job) people because of this lockdown. These are just the tips of many raising issues, we need to look deep to understand more.

This current situation is bringing out the good and bad sides of the society and it is our responsibility as a society to work on it for the better. We also need to look at the priorities of the government, better public infrastructure, health care facilities, quality life for everyone and to look beyond just the aesthetics of design and infrastructure and design with intent and social responsibility. Now seems to be the perfect time to look over the socio-political and economic policies in our country, the critical factor of the country which has been overshadowed by the capitalistic heights. Here is a chance for the entire nation to peel off the superficial layers and look closely at how things got done and the people who carry our basic privileges on their shoulders. Our privileges are paid for by the people who are underprivileged to even make a choice. No matter the tantrums we throw at them, epidemic or not, they do all the so called dirty work so we can look clean for the outside world - that should not be the case anymore, social justice needs to be the priority. It is in our hands solely as a society, as a community to make the real difference out there after this pandemic is over. It is never too late to learn the truth but to act on it is.

ARE YOU GRATEFUL ENOUGH?

SHANMUGA PRIYA

Gratitude is an emotion where you feel blessed to have something in your life; it could be anything from materialistic acquisitions to natural talents. But I sense this feeling of appreciation has gone down in our current lifestyle as compared to our older days. Previously we required only few materials to keep us happy such as less number of toys shared among siblings, old books passed down to next generation and special home-cooked meals on important occasions. Even when we ran out of toys to play, we always made use of regular items such as stones and twigs to make new games and played with them without pestering our parents to buy things, but when they did we were very happy for it and felt grateful even though didn't realize the term gratitude at those times. Most us would have experienced this sensation except for the kids who were spoilt with choices as today's kids. This eventually leads to the awareness that lesser the things we own, we are more grateful for them and utilize them to their maximum potential. This attitude is lost amongst the possession of a large variety of things as we aren't aware of the things we own in the first place followed by their potential uses. Let's see how gratitude plays an important part in the lives of most people who had achieved great heights. They are usually from humble beginnings where they have nothing but only dreams, goals and an appreciation for the opportunities presented to them. Due to this attitude, they make the most of their situations to reach their dreams through unique pathways in turn paving a new path for others. People who have everything follow the path laid before them to achieve the peak of success while people who own nothing are likely to set a new path. I am not here to say that everybody should give up their possessions to achieve in their lives but just be aware of what you have and begin to be grateful for all you have and appreciate them wholeheartedly. Be grateful to be alive at this moment, to be able to read as it opens up the doorway to other people's worlds through their books, to have food at our tables and lot more. Feeling grateful creates a peaceful and harmonious state, which is evidenced by the water freeze experiments performed under different emotional conditions by the Japanese doctor, Emoto. The water frozen under positive emotions such as love, gratitude and joy produced beautiful crystals with perfect symmetry while the opposite was true when negative emotions such as anger, fear and lust produced ugly and distorted crystals. When exposure of the emotions for a few minutes could have these drastic differences on the water structure, imagine what happens when you express those emotions in your body which is composed of more than 70% water. Enough said, let's start feeling grateful towards our lives.

References

- 1. M.Pitkanen. The experiments of Masaru Emoto with emotional imprinting of water. 2019.
- 2. https://positivepsychology.com/gratitude-appreciation/ 3.https://www.cnbc.com/2016/11/04/being-grateful-improves-your-chances-of-success-studies-show.html



THE WRITER

Dr VARANASI RAMABRAHMAM

The writer is the conscience keeper of the society. The writer can be a poet, a fiction writer, a novelist, an essayist, an originator of philosophical thought, a spiritual quest and the like. The commentators on all these are also called writers. The commentators may agree with, differ, like, dislike, modify, extend or regulate the expressions of the original writers. The commentators are also called critics, some for and some against the writer.

The writers of natural scientific and social scientific articles; writers writing articles on social and cultural events, cinema, music, drama and the like fine arts and many such avocations are not covered by the term writer. The term writer is generally equated with individuals creating poetry, fiction, novels; thus, relating to literature mostly and we can say alone. Translators are considered though not as writers themselves, but are commended as helpers and propagators of writers.

Writing is a sublime art and natural trait. It is an urge. It is the result of the sensitive and sensible nature of the individual. Writer automatically creates initiated, driven, guided, counseled, regulated, edited, by inner sensitivities. It is in-tuition which makes a writer in response to happenings within and around the individual. No one asks or invites a writer to write something. It is his inner consciousness and conscience which stirs, makes him/her moved and a flow of thoughts and feelings are generated within which take the form of the sentences and are expressed through writing on a paper or now a days through key board.

The sensitized mind or touched heart of the writer will not allow one to rest until he/she gives the thoughts or feelings language form and put on paper or computer screen. Such being the story of creation by a writer, the writers will be possessed by their inner pleasantness, turmoil or the like emotions and intellectual reflections. All civilizations have writers, encouraged them, adored and admired them; and the aesthetic readers and critics play an important role in making a writer popular, famous, earn name, fame and money and immortality.

But all the writers cannot make a profession out of their writing. Most of them do some other job for their livelihood and also create. Very lucky few only can make a profession out of their writings. Whether they are able to make money out of their writings or not all writers make impressions on society through their creations.

The eternal debate whether a writer must write for himself and society indirectly gets benefitted or otherwise because of it; or writer must cage himself and be restricted to an ideology, ism or such things goes on. Both types of writers exist in all civilizations and societies. Thus the writer will and shall decide for oneself what to write about and the society and critics always have the choice to accept or reject the writer and his writings.

The tradition that a writer must print his work and then all recognize him/her as a writer is still strong. Even though thousands of websites devoted to literature are available globally, writer becoming famous, earn name, fame and money only by contributing to websites is yet to pick up. The views of the professional critics rate a writer based mostly on his printed matter; and merely readers who enjoy the creations of a writer on websites do not and cannot make a writer a writer. This adherence to print-recognition can give place to web-recognition by readers too; in making a writer a writer.

Most of the websites invariably are eager to get the "printed writers" to their sites rather than the sites themselves initiating efforts to make their "web-writers" also rise to the fame of being called a writer. This will definitely happen. Must be happening elsewhere already.

Many writers are dedicated to writing because of their nature and not expecting money, name or fame; and money, name and fame will not adorn all writers equally. Whatever might be the financial, popular and the like position of a writer, a writer invariably continues writing till his/her last breath.



SCIENCE SHORE | PAGE

DANNY, THE FUNNIEST

V VARSHA SHREE

Somewhere in the world, there was a boy called Danny. His best friends were Sammy and Mary. One day, Danny's dad told Danny, "We shall be buying a new dishwasher today. Can you get some dishwasher salt and detergent, Danny?" Danny replied, "Yes, Dad!" and went off to buy them. In the shop, Danny found some iodised salt and took it. Then he found some pepper and thought it would be a good companion for the salt, and took it. Then he found some cloth detergent, and took it. Then he went and bought them at the billing counter. He went home and his dad said, "The dishwasher is here. Give me the bag of items, Danny!" and Danny gave it to him. He took the salt and he said "lodised salt? Why have you bought this?" Danny replied, "So that the dishwasher doesn't get goitre. I heard that if there is no iodine in salt, you will get a swollen neck." Dad said, "And what about the pepper?" Danny replied, "How can the dishwasher eat salt without pepper? It too needs good taste!" "And detergent?" asked Daddy. Danny said, "That is for its clothes. It needs clean clothes, too!" Danny's dad shouted `Daaannnnyyyyyy!', but Danny had already run off and escaped from his angry dad. He then went off to play with Sammy and Mary, and told them about it. Laughing, they said 'Oh, Danny! You are the funniest!'





POETRY



SCIENCE SHORE | PAGE 6

NATURE NEVER LIES

M ARIVUKKARASI @ AAZHI (PEN NAME)

There I stand
Just as still as a statue
Watching the Sun
Paint the Canvas
Called Sky

It beckons me
It calls me
To just keep staring
To just keep looking up
Saying that "I am never the same ever"

True that
For I hope
Nature Never Lies
Cause it is it's nature
And yeah
That is why
It is Nature

True and pure
In all its forms
Serene and calm
Causing no harm
No acts No plays
No masks No mind plays
For it's just the way
It is Being its own kind of beautiful

Beckoning everyone
Breaking through boundaries
Crashing through classes
Dashing through divisions
Easing through inequalities

To stand still
And just pause
Breathe and watch.



DUSK

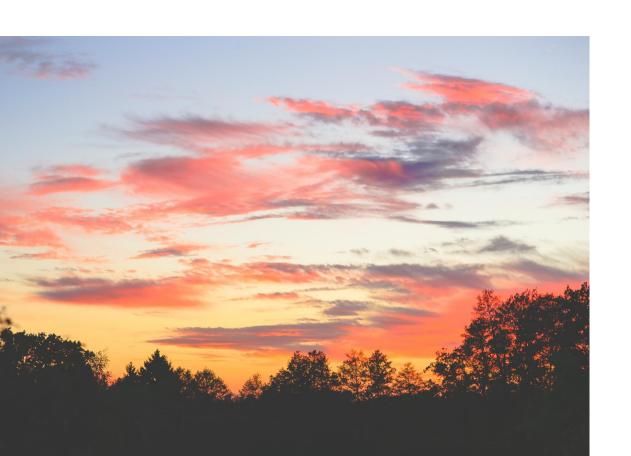
M ARIVUKKARASI @ AAZHI (PEN NAME)

It's that time of the day
When the sun retires for the day
And the birds fly back to their nests

It's that time of the day When the oceans glitter gold And the skies shimmer in warmth

It's that time of the day When the streaks of light Makes a painting come to life

It's that time of the day When people retire for the day And She awaits His return Watching the light go down But the painting coming to life.



WHEN WE MET

BHAGYASHREE MISHRA

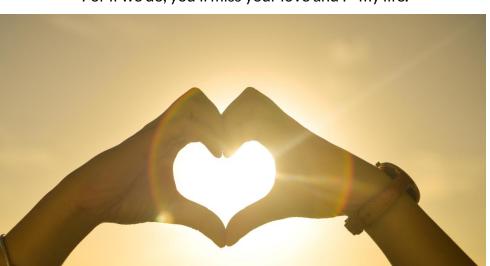
Wandering as a nomad, you were in search of a cosy home I was homeless even if I thought I had found my home We met when the lines of our destinies crossed And in no time you turned out to be my strength, and I - your weakness.

On the caliginous skies that concealed my life back then
You nestled, being the brightest ray of sunshine
A spark touched our souls, and buds of love blossomed in our hearts
And in no time you turned out to be my choco lava cake and I - your savoury snacks.

Prior to your presence, I never knew if magics, miracles ever happen In you, I seemingly found my hidden treasure, my ultimate source of joy An extrovert you are, an introvert I am, Thus exists the best bond between us You turned out to be my snowflakes in the summers and I - the warmth of your winters.

I long not for an inch more than you, nor for an inch less than you For me, you're the perfect partner in smiles, tears and crimes We chose each other for a lifetime, maybe because we were supposed to And in few days of time you turned out to be my secret keeper, and I - your best listener.

As pure as prayers are the seeds of transparency we did sow You offered your shoulders each time I shed tears With utmost grace, I embraced your insecurities and fears Now that we are together, let's strive never to give up For if we do, you'll miss your love and I - my life.



ARTIST VS SCIENTIST

DHANASEKHARA PANDIAN M

An Artist strives to explain his reality to the world.

A Scientist strives to explain the reality to his world.

The Artist dives deep into his individuality relying on his irreplaceable variables.

The scientist dives deep into the generality relying on the replaceable constants

The Artist hopes that his creation stands out from the world.

The Scientist hopes that his creation fits into the world.

However,

In popular perception, the artist is understood more than the scientist.

Atleast that's how it seems.

An artist doesn't mind the chaos of him standing out.

The scientist doesn't mind standing out in the chaos

Artists create

But a scientist just recreates.

Artist shows the World, it's meaning.

Scientist seeks meaning of the world.

An artist, even if he strives to imitate the world, he will end up creating a new one.

However,

the scientist, no matter how hard he struggles to recreate the world,

he will end up only imitating it.





I AM CHOKING

GITI TYAGI

O human! Beware!
The deeds misdeeds leading,
Towards the self-destruction of thyself,
O conqueror of the Earth and Space!

The beauty I bestowed and showered, The love and unison of man and nature, Millions lived under my shade, Countless slept on my motherly lap!

Disruption of a future safe, Chaotic scenes of the burning flame, My children flee to save their lives, Ah! In vain! Engulfed in the swelling blaze!

The eagle soaring up crashed down,
The agony of her burns I felt,
Her wings aflame, breath slowly lost,
As a helpless mother, I wept, my baby's lost!

The nests fell down, the hatchlings cried, The inferno gulped, couldn't bear the sight, My babies, species of several types, Hither thither rushed, hurried and dashed!

The falling trees, the crushing hopes, The burning branches, the blazing leaves, The raging fire, the fiery flames, Swathing engulfing flaring them all!

The frail trunks gave way, sank to the ground, Millions of trees plummeted tumbled down, Continuously incessant, I endure the torment, Burnt down to the ashes are the inhabitants mine! The 'Lungs of the Earth' proudly termed, I keep you alive with the air you breathe, This day you burn me down, the motives selfish, Cut not the branch thy sit upon!

The slayer can never the saviour be, O human mind! Beware of thy intent cruel, Not far you'll reach sans my presence, Doubtful is your existence for I am choking!





MY CHRYSALIS

GITI TYAGI

Wherein I fell prey to my own self, Pleasant silky sessile cocoon, Housed in my ego, my self-centered being, A hardened self-woven shell!

Fed upon the leaf that was born upon, As the gluttonous caterpillar, my ego I fed, Ravenous ever, too big and prodigious, Molting thus, discarding my virtuous self!

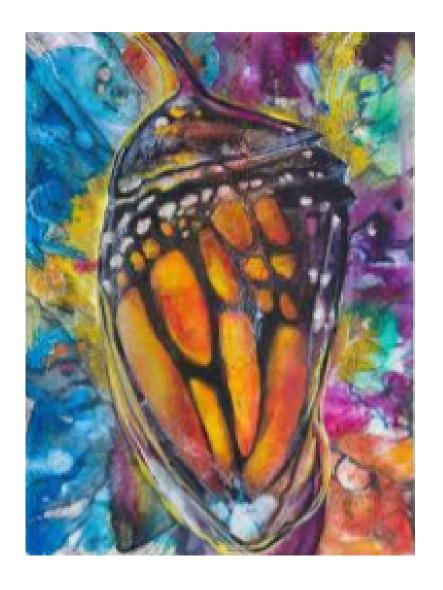
Entangled, entwined in the web spun around, Contracted, held the shell so dear, Buried deep under the burden, Of my hard-earned tags!

For all that's me, responsible I am, Diligently worked to be surrounded, By the pleasant silky sessile cocoon!

Thoughts all converged, focussed on to me, I, me, myself- is all that I could see, My world revolved around but me, The conqueror I was, superior to all, lesser to none!

Metamorphosed to an imago, a day too soon, Gave way to wings, no dormancy nor diapause, Not mine though, turned inwards furthermore, My shell with time hardened still! Thoughts spun as in a web, no shackles broken yet, Forgot to remind myself though, To shed off the cocoon that sheltered long, The narrow-minded, self-centered me!

The imago's wings flutter open, No more I hold myself slave, Ready I am to let go off, My CHRYSALIS!



THE ALARM

KEERTHANA RAVIKUMAR

As invisible as possible

As hidden one could get

As no one to gamble or bet,

For everyone's life in complete debt,

As a ride he took into nostrils and lungs

A taste of life's bitter truth in heart and not tongues.

Oh! You lovely soul

Be calm and thrive

As this too shall pass

As life in the universe might solely be a trespass.

Annoyance at peak,

World completely bleak

Every mountain to snow-capped peaks.

Silvery Glaciers diving to form wholesome threat waters,

Leading life to batters.

Galaxy and Nature at its destructive ends.

Climate change never to see bends.

All together try to sprinkle a lesson,

Here we lay at the edge of nature's treason,

A struggle to mend and pardon!

As spiky one could get,

Infection and scars beneath every window blind

Pollination of spikes to human kind

Plundering into every being without warning bells

A trespass who tries and dwells

Microscopic and minuscule

Singing and dancing within every blood stream

Questioning every territory about the rescue

Our nature's terrorist regime in gleam! livelihood getting closer to a dream.



The deeper truth learnt the hard way.
Claps and applauses should never fade away,
As the warriors at front are halfway
As selfless as possible,
Curbing the countless death,
Sacrificing to save every breath.
Oh! You lovely soul
Be calm and thrive
As this too shall pass

As life in the universe might solely be a trespass.

FLUTTERING DREAM FLOWER

LEENA RAJAN

Graceful, like a dream flower, entered room, Gorgeous brightly hued butterfly, with gleam, Gaily in vibrant morning while I relish coffee, Gently dancing and fluttering like sun sheen.

Enchanting like, nature's feast spread inside, Ebullient its sight at dawn joying scope aside, Enlightening an experience and mesmerizing, Exchanging cheers in morning so invigorating.

Suddenly started to swirl and whirl to and fro, Swaying swiftly with air current of electric fan. So quickly to save, I rushed to switch off fan, Speedy fate defeated me, to ditch too fast.

How joy caught in fan's leaves so nimble, How a scope of delight ended so ethereal, How fast is a shiny scene so changeable, Horribly how all end is so inconceivable.

Lying were many tiny pieces of hued wing, Littered and scattered over, woefully along, Life's inconstancy so indubitable in universe, Lesson to us ever and anon given boundless.



COVID'S VENTILATOR

LEENA RAJAN

A lung to us when are laid to coma condition, Artificially when we fall crucial by Covid19, A ventilator, not a comfortable easy condition, Ailing and a painful wretched sick situation.

Covid19 ventilator with a tube till reaching, Circumference of lungs harshly via throat, Callous, its procedure, not easy or soothing, Causing anesthetized lull and discomfort.

Tubes around for liquid food and medication, To urinate a bag, waist bag wound absorbing, Tools of excretion, measuring heart and lung, Tasks, and pressure by ever alert equipments.

Paramedical experts, nurses and health staff, Preserving normal even mobilization of limbs, Pierced venal tubes for glucose or medicines, Pumbing ice water to rounding tanks for fever. Not a mere tube of oxygen, ever comforting No good sleep, no speech, a mechanical lung, Nearly attached to us till we recover or dead, Numbed by medication, sans man's nearness.

So tedious an ordeal to all, all most deadly, Sans any normal actions of our organs any, Speeding ill-health of which withstanding life So becomes severe, so horrible, this lung life.

Escape this torture, by being obedient to rules, Established for safety, stay safe at own home, Emerge out only on real need, that too often, Ever masking, sanitizing and washing hands.

Let us each be preserver of healthy good life, Let not government take sole responsibility, Loftily we can defeat this unbelievable enemy, Lifting over selves like angels in Divine hands.

SWEET SYMPHONY

MEDHA TRIPATHI

Some moments don't need to be parts of a bigger story,
Just need to be left like gems of memory.

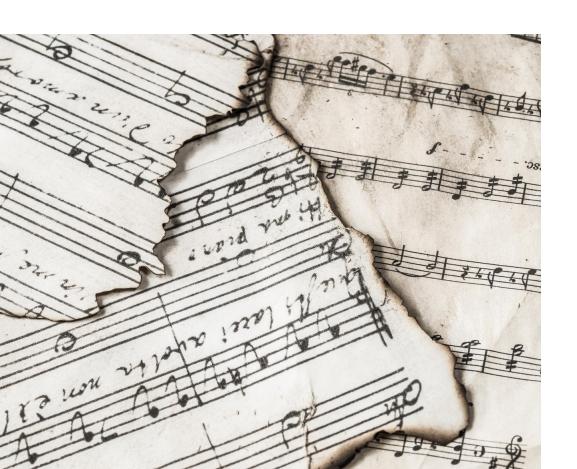
Some things happen just to be seen by the mind's lens,
To be a sweet symphony in the night's dark silence.

Some moments don't need to be the start of something new,
Some are just gifts of life that come out of the blue.

Some things happen just to lead your mind in a land of tranquility,
Some moments are just meant to be perceived with passivity.

Some things happen, just to be left in the past as your history,
The consequence of pursuing them always meant to be a mystery.

Some moments are just meaningless strokes of serendipity,
Some moments are meant to be just those, for eternity.



WINDOW OF HOPE

MITHUNA MARAN

Window of Hope

There was a beautiful time,
When I took things for granted
Little did I know,
They'd be the most wanted!
Meeting new people,
Shaking their hands,
Touching wet grass,
Walking barefoot on sand.

Covid they said;
Isolation - the only key,
Locked up in my room,
Since March 23;
But there is a little window,
Reminding me everyday,
That a new life outside
Will come to me one day!

-Mithuna Maran



THE POWER OF THOUGHT

ROOPA SUBRAMANI

What is thought? but a photographic memory,

What is memory? other than a relived experience,

What is experience? other than a preconditioned perception,

What is perception? other than a sensory apprehension of things,

What is the root of sensory apprehension? other than a mind capable of recognizing it,

What is the root of mind? other than an innate intelligence animating it,

What is the root of this intelligence? other than an independent energy source illuminating it,

The root of this energy source is the **I**that alone is both worthy and capable of self-projection that

which is this created world,

For the **I** being pure consciousness, thoughtless as it were, but when a thought arose in it,

by the way of,

illuminating the intelligence,

animated the mind,

to allow the senses to apprehend the things,

as perception,

thereby creating an experience,

to be stored as memory in the thought of man,

Therefore,

This **I** (God), though thoughtless in essence entertained a single thought and has become this

entire universe,

And that, is the Power of Thought!!



THE LOCKED LIFE (BASED ON THE THEME OF COVID-19)

RUMPA RAY-GHOSH

The horizon is bright every morn
Yet the mind wakes with a dismal fear

The concrete blocks standing silent Urban roads with enormous traffic now empty and clear

The bustling crowded trains Have vanished leaving the tracks bare

The city seems sleeping in broad daylight That never rested since many a year

The birds chirp and chatter
The sole rejuvenating sound to hear

The mighty gleaming beams of hope will reign Making the dark clouds of unseen evil disappear.



BOUNTIES OF NATURE

B S SAROJA

Nature, you are my mother Bountiful are your treasure Sustain all of us dear with great pleasure!!

Your love for us boundless, Endless, Melodious ever new song!!

Your play of giving, withholding, revealing and hiding a mysterious and fascinating game indeed!!

You make my life exciting through your continuous and measureless gifts! Being a mother you very well know what a child really needs!!

How can I payback my dear mother? Perhaps by looking after you like a truly loving son!



"I'M UNIQUE"

B S SAROJA

I don't know why Showing distress I laugh and cry..

I'm God's special creation Have unique fragrance you never know really...

Can't help I resist change but you feel strange...

Can you talk like me in phrases and gestures?

I form my own opinion!
I don't like formal schooling...
No hurry,
I learn slowly..
I don't mix freely
for I don't see anyone
like me...

You may like me or not I'm like this!!



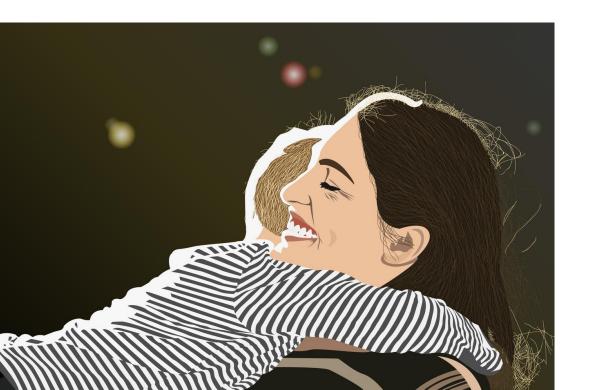
HUG AND KISS

SETALURI PADMAVATHI

Hey, Mom! I miss you and miss you a lot! I'm lesser than the patients, who you serve I'm far away from you and your lovely hug! I heard the hug is sweeter than a kiss, Your warmth filled hug, I really miss!

I don't want any nice gifts that are precious Your loving touch is more valuable than them I long for your pampering touch on my head I wait for your affectionate kiss on my forehead Give me a hug filled with comfort and support!

I see you from indoors whenever you're here You express all your feelings through your eyes I could read your mind, but couldn't feel you You're my world and I am in your world I can't wait any more for you, my sweet mom!



STRANDED ON THE PRECIPICE OF A NEW VENTURE

The musings of a teenager who was supposed to spend her last year of school actually at school and not at home.

SHREYA SEVELAR

As days turn to weeks And weeks turn to months The days of the week Begin to blur into one.

To see my friends in real life Would be a wonderful treat Alas, I know, when I do see them, It will be brief, yet sweet.

The canteens veg roll I long to taste
The feeling of a familiar friend's embrace
The chill of the library
After PT in the sun
What used to be so dreary,
Now seems so fun

As we reminisce the past
A fear of the future
Remains in my heart.
Stranded, on the precipice of a new venture.



With that being said, the poet would like to extend her heartfelt gratitude to those of us who are at the forefront of this battle. The many doctors, nurses and other healthcare staff without whom we cannot manage the crisis, as well as essential workers like the media, municipal workers, domestic help and countless others, without whom life would have lost all semblance of normalcy. Your contribution will not be forgotten. Thank you.

AN OWL POST TO THE GROWN UP FRIEND

SIVA AMRITHA NIVEDHIDHA R

The cherished friendship Innocent and serene She named it Harry & Ron They grew up together in each others mind until a good day they met by chance Imagination had to stop, For reality struck up a cordial cord They grew up together Until the magic of life unwinded on its own. Ron is a wizard and an auror of sorts! Too busy to remember that friend of his Harry had lessons to learn and unlearn the naturally fertile childhood When aurors grow what do they become? And what magic does the busy life holds up onto it to unwind?! Imaginations forced to be abandoned, In the sands of childhood What would Harry imagine Of Ron as Auror to be like! What if the wand never broke to kill The deemed demon Their you know who! But alas it did, Ending their together quest Now all in peace, Even Harry's Voldemort! Harry's famed scar-Does it ache anymore? May be, yes! In the memories of the tale that started together

Wish that phoenix's wand could fix

Of innocence and carefree childhood.

The jinx of time and change!

To buy back the joy



THAT ONE DAY....

S SWARNA DHEETCHITHA

That one day was when everything took place, Where I accidentally caused a sad face. Though I did nothing real tough, It hurt that person tough enough. And there started the uncordiality, With the person who owns my idolatry. He did not show much of his rage, Instead he took into a base. Nevertheless, I did nothing, I felt my action was offending. Every single time he crosses me, I make my mind up to offer an apology. But the 'apology' never really came to pass, Which left a crack in a beautiful friendship, alas! Now there I stand worrying about my actions, And there you go, Learn from this and never play with others' emotions.



DIS -EASE, CHALLENGE ACCEPTED

Dr THIRUPURASUNDARI C J (DAZZLE)

Hey you! An invisible threat,

Troubling our throat,

Holding our lungs,

Soaring muscles,

Killing fatigue,

Showcasing diversity, intriguing though.

You, breaking our shelled lives?

Files put in quarantine; Lives put in jeopardy,

Beware, challenge accepted!

Remaining strong and long,

Our magnitude within can never be matched,

Our fearless attitude to make you embarrassed,

Even this shall pass, our hearts truly blessed,

As we fall, shall we rise!

Neither downing nor clowning,

Rays of positivity working wonders,

Hope never shattered,

To bid you farewell; a lot it mattered!



THE PARROT IN MY MANGO TREE

VIDYA SHANKAR

Standing incarcerated in my grilled-in balcony Finding joy in the beauty of the mango tree beyond I was distracted by a ruffle in the leaves...

It was not the wind; the movement was purposeful As if made by a hand.

There being no trace of life, my spine shivered At the ghostly apparition and my breath came In quick gasps but soon held in silence For, there appeared a little hooked coral A beak plucking at an obstructing mango leaf Now once, twice and again till it came loose And fell down. The obstruction now out of the way The coral set to work.

As it bit, little by little, into the tempting smoothness

Of the large mango, I tried to trace

The camouflaged body amidst the green foliage.

Waited I patiently for it to reveal itself—

My biding was not in vain.

The parrot, engrossed in its meal

Moved out from its hiding as it came to peck

The unexplored parts of the fruit.

I watched with silent amusement

The bird and its undisturbed act.

And when satiated, it flew away

A carefree, unworried bird into the skies

Leaving its half-eaten fruit for its meal

For the next day.

There was no greed too, its wings opened out

When it flew showed no signs of fruit

Tucked in for its brood.

Was that why it lost not its freedom

While I looked on from a lockdown place?



Photo Credits: Shankar Ramakrishnan

A PHOTOGRAPH

M VISHNU PRIYA

Looking at you
All those laughs and smiles
I remember
who you are
A story teller
You cease and capture the time
When I need
To bring it back
You're an ocean
Often returning to the shore
I hear you
And see you cease my time.



OH MY DEAREST MOBILE PHONE

M VISHNU PRIYA

Once upon a time, I used to know how the world seems to be.

And then, you happened and turned my world upside down Now, you are my world.

The whole universe lives in you

As soon as I wake up, if you're not with me, I'll go crazy.

All my day, I spend with you neglecting people around me.

I'll hold you even in my sleep.

You're my secret keeper, my best friend, my photographer.

You are the only one who knows my mid night deep conversations.

I'm alive only when you're with me, else my heart ceases.

Love you to the moon and back, My dearest mobile phone

Your owner.



Disclaimer

Content published in the Science Shore Magazine represents the views of the contributors and does not represent the views of the magazine. Science Shore cannot accept legal responsibility or liability for the opinions or views of the contributors or any omission or inadvertent errors.

Copyright

Copyright stays with the authors and first publication rights to the magazine. The magazine will not be responsible for any copyright infringement.

For feedback and contributions, reach us at

www.scienceshore.com scienceshoremagazine@gmail.com