

PR  **SENSE**

150

A COLLECTOR'S DIGEST

Prime Point Srinivasan | Susan Koshy | V. Rajendran | Triambak Sharma



Prime Point Foundation | Chennai

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Foreword From Dr. APJ Abdul Kalam

Dr. A.P.J. Abdul Kalam
Former President of India



10, Rajaji Marg
New Delhi-110011

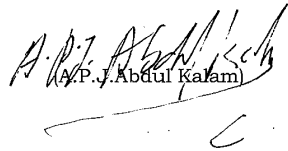
FOREWORD

I am very happy to know that the PreSense monthly ezine published by Prime Point Foundation is bringing out a book based on some of the unique articles, interviews and events published in its editions so far since from March 2006. The 100 issues of the publication have gone through an eventful journey, focusing on knowledge capture and important knowledge dissemination. I recollect my direct association with PreSense in July 2008, when I launched the cartoon character, 'Prince', created exclusively for PreSense.

I see PreSense continuing in its journey under the mentorship of Prime Point Srinivasan, maintaining its status as a must-read ezine, in the fast moving and evolving world of communication, knowledge and connectivity.

I congratulate the Editorial Team of PreSense for bringing out the 100th Edition as a Collector's Digest.

28th May 2015


A.P.J. Abdul Kalam

Message from Hon'ble Governor of Tamil Nadu

Banwarilal Purohit



RAJ BHAVAN,
Chennai-600 022.

MESSAGE

I am pleased to learn that the eMagazine, 'PreSense' is launching the 150th edition along with an eDigest titled, 'PreSense150' containing select articles published in the past 150 editions on Saturday, 24th August, 2019. I am very happy to learn that PreSense was launched in March 2006 on the encouragement of former President of India (late) Dr APJ Abdul Kalam to spread positive journalism.

Due to the rapid growth of technology, the media communication has undergone a total change. While the readers are able to get the information with lightning speed through digital tools, including social media, it has also posed a great challenge to the consumers to verify the genuineness of the information. In this situation, I am glad to note that PreSense has dedicated itself for positive journalism since March 2006 and is bringing out the contents for the benefit of the society. Besides, it is heartening to note that PreSense is silently creating awareness through its five initiatives, like Education Loan Task Force, Sansad Ratna Awards, Digital Journalists Association of India, Digital Security Association of India and Next Gen Political Leaders. This is a good example of how technology tools can be used for the benefit of the society positively.

I greet PreSense on its steps into the 150th edition and wish that this eMagazine meets with success in all its endeavours.

(BANWARILAL PUROHIT)

Chennai,
20th July, 2019.

Preface to the First Edition

The emergence of Internet in the 1980s changed the way of communication globally. When Videsh Sanchar Nigam Limited (VSNL) introduced the internet for commercial use on 15th August 1995, India too adopted the new communication model and medium.

Way back in 2002, we published our first electronic newsletter in a move that was viewed as progressive and visionary in nature. After 8 issues, we had to discontinue the newsletter as its electronic form was not regarded contemporary then. In March 2006, we resumed with an ezine titled 'PreSense' with a shift in focus to creating awareness about the essence in personal and corporate communication.

Interestingly, at that time, no bigwig was willing to give an exclusive interview for the re-launching ezine, or even launch it, as there was apprehension about the success of the concept of an electronic magazine. Dr Y S Rajan (co-author of the book, India 2020, with Dr APJ Abdul Kalam) however encouraged us and volunteered to launch the ezine online.

And so we progressed, introducing interesting interviews with eminent personalities recorded on podcast and synchronised with the ezine format, so that the readers were treated to both online reading of contents as well as audio version of interviews. This enabled the readers to a feel of listening to the personalities they have read about in the ezine. We also introduced the concept of Guest Editorship, enabling the association of renowned professionals to share their experience and viewpoints as Editor for the month. This move gave an uplift to the outlook of the ezine and a new trend in its journey ahead.

Many newsletters and ezines launched during the same period were discontinued later for various reasons. PreSense however, survived the test of time and continued till its 60th edition in February 2011. After a deliberate brief break of a few months, we resumed the publication of our ezine, with a new look and a

shift again in the focus to a social and general theme, with the tagline, 'Spreading Positive Vibrations'. This shift in focus enabled a more holistic approach to the theme and subject of communication. The attention moved to global current news, historically significant events, and knowledge-based breakthroughs in technology. This turned out to be an exciting challenge for the editorial team to sustain the positive strain while including novel and currently interesting topics for the reading pleasure.

Although an ezine might not be comparable with a giant-sized main line medium of communication, it has its own advantages as a medium of reaching out. The *Sansad Ratna* Award Scheme and the Education Loan Task Force were two major initiatives by our ezine, giving it the privilege of being recognised as the host to two major issues of national relevance.

Over a period of 9 years, our ezine has given opportunities to many young people to experience firsthand, the nitty-gritty of digital magazine making, editing and publishing. At the request of many of our loyal readers, we are now bringing out this book called 'PreSense 100', containing 100 plus articles, handpicked from the past 99 editions of our ezine. We felt that the selected articles qualified as a collector's item, and hence this special issue is described as a Collector's Digest. It is our belief that the reader too will appreciate it as one.

Up until now, our ezine has been published, not for commercial gains. We are proud to have many professionals on board, contributing their valuable time and talent in the making of the ezine every month.

I place on record my gratitude and appreciation to all the past Editorial Team Members like Satish Naaraj, Vidya, Tushar Panchal, Veena Vinod, Swetha and innumerable others who contributed immensely to make the ezine a professional one.

I personally thank our ezine's Editorial Team members for their sustained support in bringing out this book. I acknowledge the valuable support given by Susan Koshy, V Rajendran, T N Ashok,

Prof. Jagannathan, Sukruti Vadula and Dr Ramamurthy Natarajan for editing and formatting this book.

At this stage, it is pertinent to mention that during the process of publishing every edition of the ezine, there was the collective, professional and committed involvement and input of every editorial team that was associated then. It has been the endeavour of the team to maintain a progressively high standard of the contents and readability of the ezine. We believe these efforts met the expectations of the readers, based on the positive and constructive feedback we kept receiving from our diverse and loyal readership base.

Right from the beginning, we have always been the beneficiary of the blessings and guidance of Dr APJ Abdul Kalam, Former President of India. I also thank Mr V Ponraj, (Scientific Advisor to Dr Abdul Kalam) who supported us in the selection of its contents.

When we planned to publish this book for free distribution, Dr Maria Zeena of Sathyabhama University volunteered to sponsor the cost. I thank her and her team for the noble gesture. I thank Polaris (Padmini and her team) for designing the cover. I thank Sri Logeswari Prints and its owner, Shri M Muthaiah for bringing out this book on time.

I thank the innumerable readers and well-wishers who have given unstinted and close-knit support during our journey. Finally, I thank God Almighty for the divine blessings during the journey of 100 editions.

K Srinivasan
Chairman, Prime Point Foundation
Editor in Chief, PreSense
Chennai
www.corpezine.com
editor@corpezine.com

Preface to the Second Edition

The First edition of PreSense 100 was released in June 2015 as a digest of articles published in the earlier 99 editions. The first edition received an overwhelming response from multifarious groups as students, IAS aspirants, parliamentarians, bureaucrats, and other intellectuals. In view of the support received from the readers, our editorial team decided to come out with the second enhanced edition titled PreSense 100+ with additional articles published between June 2015 and April 2016.

We thank Dr P Ganesan, Chairman of Sony Fire Works (Pvt) Limited and AAA College of Engineering and Technology, Sivakasi who volunteered to sponsor and print this second edition for distribution. The Editorial Team gratefully acknowledges the support given by Shri Bharath Matha Mohan (Educationist at Chennai) and Shri VSM Velmurugan (Chairman of VSM Groups, Kovilpatti) in bringing out this second edition. We also thank Smt. Padmini and her team at Intellect Design for designing the wrapper. We thank innumerable other people who contributed to make this second edition possible.

K. Srinivasan
Editor in Chief
PreSense

Preface to the Third Edition

The first edition of the Digest titled PreSense 100, containing articles published in the first 100 editions of our ezine was released in June 2015. The second enhanced edition titled PreSense 100+, covering 110 editions, was released in June 2016. Due to the overwhelming response from our readers, we are now bringing out the third enhanced edition, covering important articles published in 130 editions of our ezine PreSense. This Digest is titled PreSense 130.

Dr P Ganesan, Chairman of Sony Fire Works (Pvt) Limited and AAA College of Engineering and Technology, Sivakasi has always been a source of inspiration to us. He sponsored the second edition of Digest. This time too, he has volunteered to sponsor and print this third edition for distribution among youth.

We also thank Smt. Padmini and her team at Intellect Design for designing the wrapper. We thank innumerable other people who contributed to make this third edition possible.

K. Srinivasan
Publisher & Mg. Editor
PreSense

Preface to the Fourth Edition

The journey of the eMagazine PreSense since March 2006 is amazing and exciting. During this journey, we were able to publish in the print format three editions Digest of articles published in the 100,110 and 130 issues respectively.

We have been receiving large number of appreciation from readers on the contents of Digest. Enthused by this, we are now pleased to release the fourth edition of digest in digital format titled PreSense150 containing select articles published in the 150 issues.

We thank Dr B Muthukumaran, Co-Founder of Digital Security Association of India (DiSAI) and Advisor to Digital Journalists Association of India (DiJAI) for all technical support in making this eDigest. We also thank Smt. Padmini and her team at Intellect Design for designing the wrapper.

I personally place on record my gratitude to Mrs Susan Koshy, Mr Rajendran, Mr Triambak Sharma and other editorial team members for the sustained support they are giving for successful publication of the eMagazine PreSense every month. We thank innumerable other people who contributed to make this third edition possible.

K. Srinivasan
Publisher & Mg. Editor
PreSense
24 August 2019

Editorial Team 2019



K Srinivasan, Publisher & Mg Editor: Former Banker now turned Image Management/Communication Professional. Social media Evangelist. Chairman of Prime Point Foundation and Digital Journalists Association of India (DiJAI).

Susan Koshy, Editor in Chief: Former General Manager of IDBI Bank Ltd and Communication Professional and Trainer. Secretary of Digital Journalists Association of India (DiJAI).



V Rajendran, Editor: Cyber Security and Cyber Law expert. He is Past President of Cyber Society of India (CySI) and presently Chairman of Digital Security Association of India (DiSAI).

T N Ashok, Consulting Editor: Senior accredited Journalist at New Delhi. Former Economic Editor of Press Trust of India (PTI). He is also a Communication Advisor to corporates.



Triambak Sharma, Editor of Cartoon Watch, the only cartoon magazine in India. A popular Cartoonist in North India. He draws the Prince cartoons for the ezine.

Dr R Jagannathan, an Academician. Former Vice Chancellor of Middle East University, UAE. Visiting Professor of physics to various leading universities in USA. Presently, he is the Pro-Vest for St. Therasa University, West Indies.





Dr Sudarsan Padmanabhan. Associate Professor at IIT Madraas. Expert in politics and governance. He is an expert in Political Science.

Prof. Prabhakar Krishnamurthy, a well-known Economist and Management Professor. He is one of the few experts in India on 'Social Forecasting'.



G Priya Dharshni, an advocate assisting in the Hon'ble Supreme Court of India is a top-performing graduate in Political Science, and a post graduation in Psychology. She had earlier worked with The Times of India news publication. She is the Secretary of Next Gen Political Leaders (NGPL).

Ezine PreSense - Initiatives and Impact

Journey of Ezine PreSense - Milestones

Dec 1999	Launch of Prime Point Foundation, Publisher of the ezine.
Feb 2006	Launch of ezine, PreSense online by Dr Y S Rajan.
Aug 2006	Integration of Podcast with the ezine contents.
Aug 2007	Introduction of Guest Editors.
Feb 2008	Second Anniversary Edition with Dr Abdul Kalam's exclusive interview. Masthead changed.
Apr 2008	First ezine to become 'Media Partner' for a global event held at London.
July 2008	Introduction of cartoons – Cartoon Character 'Prince' launched by Dr Abdul Kalam.
Sep 2008	Change in layout, introducing photographs on the cover.
Jan 2010	Ezine's new initiative 'Education Loan Task Force' (ELTF) launched to create awareness among students and parents.
May 2010	Ezine's second initiative to honour top performing Parliamentarians, with the <i>Sansad Ratna</i> Award launched. Golden Jubilee (50 th) Edition launched.
Feb 2011	Diamond Jubilee (60 th) Edition.

A hiatus after 5 years of uninterrupted journey

Apr 2012	Ezine resumed in a new format of contents. The tag line changed from 'Communicate the Communication' to 'Spreading Positive Vibrations'.
Apr 2013	Tamil Nadu Governor launched a special edition on the Indian Parliament, coinciding with the <i>Sansad Ratna</i> Awards.
Jun 2013	Platinum Jubilee (75 th) Edition launched by the youth at three places simultaneously, across the nation.
Jun 2015	100 th Edition - PreSense 100 released in print format.
Mar 2016	Ezine's third initiative 'Digital Journalists Association of India' (DiJAI) launched.

Jun 2016	Second edition of PreSense 100+ released in print format
Dec 2017	Ezine's fourth initiative 'Digital Security Association of India' (DiSAI) launched.
Mar 2018	Third edition of Digest PreSense130 released in print format.
Aug 2019	Fourth edition of Digest PreSense150 launched in pdf format.

The Journey Continues.....



The Journey of eMagazine PreSense

The eMagazine, **PreSense**, was launched in March 2006 on the suggestion of Former President of India, Late Dr APJ Abdul Kalam, to promote positive journalism. 150 monthly editions have been published upto August 2019. PreSense is a 'digital only' magazine distributed free of cost through digital mode. Eminent professionals, scholars and academicians are associated with this eMagazine, and constitute its Editorial Team. This eMagazine is published by Prime Point Foundation, a Chennai based NGO.

Five Major Initiatives

PreSense has five major successful initiatives to its credit, viz.



1. *Education Loan Task Force (ELTF)* started in 2010 to promote awareness especially among students about Education Loan.
2. *Sansad Ratna Awards* started in 2010 jointly with IIT Madras, to honour the top performing Parliamentarians every year in May-June, based on performance parameters.
3. *Digital Journalists Association of India (DiJAI)* started in 2015 to facilitate development of digital journalism skills among students and professionals.
4. *Digital Security Association of India (DiSAI)* started in 2017 to create awareness about Digital Security and Cyber Law among stakeholders.
5. *Next Gen Political Leaders (NGPL)* started in October 2018 to develop knowledge and leadership skills among young political leaders from all political parties.

Printed Digest of Select Articles

In June 2015, a printed Digest of select articles from the 100 editions of PreSense, and titled PreSense100 was brought out.



FOREWORD

I am very happy to know that the PreSense monthly ezine published by Prime Point Foundation is bringing out a book based on some of the unique articles, interviews and events published in its editions so far since from March 2006. The 100 issues of the publication have gone through an eventful journey, focusing on knowledge capture and important knowledge dissemination. I recollect my direct association with PreSense in July 2008, when I launched the cartoon character, 'Prince', created exclusively for PreSense.

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I congratulate the Editorial Team of PreSense for bringing out the 100th Edition as a Collector's Digest.

28th May 2015

APJ Abdul Kalam
(APJ Abdul Kalam)

Dr APJ Abdul Kalam gave his Foreword for the Digest. The book was launched by Shri Lakshmi Narayanan, Vice-Chairman of Cognizant Technologies.

In June 2016, the second edition of the Digest covering select articles from the 110 editions was released by Dr C Rangarajan, Former Governor of RBI, at IIT Madras. This book was titled PreSense100+.

On 28th April 2018, the editorial team released the third edition of the Digest titled PreSense130, covering select articles from the 130 editions of PreSense. All the three print editions are being distributed free of cost to students and the youth. Aspirants of competitive examinations have found this Digest useful for reference.

An eDigest containing select articles from the 150 editions titled PreSense150 was released on 24th August 2019 at Chennai by Shri K Pandiarajan, Hon'ble Minister of Government of Tamil Nadu.

On 28th April 2018, the



Cartoon Character *Prince*



Dr Abdul Kalam launching the first cartoon with his autograph (24 Jul 08)



Dr APJ Abdul Kalam launched the unique cartoon character 'Prince' in July 2008.

In April 2010, The Wall Street Journal of America carried one of the Prince cartoons with the permission of Triambak Sharma and the Editor. (picture) The popularity of Prince grew day by day, both nationally and internationally.

Till August 2019, 133 cartoons with Prince as the cartoon character, have been published.

Interestingly, Dr A P J Abdul Kalam himself was one of the regular readers of PreSense and a great fan of Prince. While addressing the Cartoon Festival at New Delhi on 29th April 2011, Dr Abdul Kalam suggested that cartoonists should be remembered for creating cartoon characters like 'Common Man' and 'Prince'.

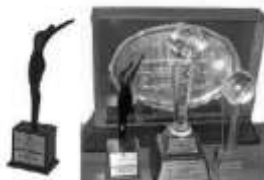


Media Partner for Global Events

PreSense has the unique honour of being the world's first eMagazine Media Partner for many global communication events in US, UK, etc.

Awards and Recognitions

Because of the thematic approach and quality of contents, many International Organisations have guest edited our eMagazine. The eMagazine got awards from Global Forum for Public Relations (GFPR), Association of Business Communicators of India (ABCI),



Public Relations Council of India (PRCI) and many others for the quality of contents.

Editorial Team

Publisher Managing Editor	& Shri Prime Point Srinivasan (Communication and Branding Strategist and Digital Journalist)
Editor-in-Chief	Smt Susan Koshy (Former General Manager of a Public Sector Bank, Communication Professional and Digital Journalist)
Editor	Shri V Rajendran (Cyber Law & Cyber Security Expert and Communication Professional)
Consulting Editor	T N Ashok (Senior Economic Journalist at Delhi)
Deputy Editor	Smt G. Priya Dharshni, (Advocate, Supreme Court, Delhi)
Cartoonist	Shri Triambak Sharma (Editor of Cartoon Watch and popular Raipur based cartoonist)
Editorial Advisors	Dr R Jagannathan (Former Vice Chancellor of Middle East University) Dr Sudarshan Padmanabhan (Associate Professor, IIT Madras) Dr Prabhakar Krishnamurthy (Management Professor at Chennai)
Website	www.corpezine.com
EMail	editor@corpezine.com
Google Play App	PreSense



Education Loan Task Force (ELTF)

In 2009, many poor, meritoriously deserving students were not able to get education loans from banks due to their lack of awareness of the available facility, and the insensitivity of the banks to the students' genuine needs. One poor parentless girl Ms Divya, a topper in the Plus Two class, was running pillar to post to get an education loan after obtaining admission on merit in a college.

The eMagazine PreSense decided to take up this issue and to create awareness of education loan scheme. The January 2010 issue of the eMagazine focused on the theme 'Education Loan Scheme', and carried an exclusive interview with Dr K C Chakrabarty, the then Deputy Governor of the Reserve Bank of India (RBI). The eMagazine also included some case studies about how some economically challenged but brilliant students were harassed by the banks. This edition created ripples.



At the request of the eMagazine, RBI nominated a 'Nodal Officer' at a very senior level to examine the education loan grievances. 'Education Loan Task Force' (ELTF) was formed with several eminent professionals and retired bankers as volunteers on board. The objective of ELTF is to create awareness among the banks and the students about the various guidelines under the education loan scheme.

In February 2010, PreSense organised a 'Face to Face' discussion in Chennai, with some senior level bank executives of major banks and the students in the presence of TV and print media.

ELTF is creating awareness among the students and parents about the guidelines under the education loan, through its

website and the social media. Students across the nation write to ELTF seeking guidance on various issues. Whenever well-performing but economically challenged students especially from the rural sector are harassed by banks, ELTF takes up the case for redress with the chairman of the bank concerned, and with RBI. More than 90% of long pending grievances have been resolved within a week of ELTF taking up the issue with the higher authorities.

Many Members of Parliament (MPs) support this initiative. Some of the major and common grievances are taken up by these MPs in the Parliament to find a solution.

ELTF is a voluntary service outfit. ELTF does not interfere in the credit decisions of the banks. ELTF advocates that the banks should follow the RBI/IBA guidelines scrupulously so that the deserving students, especially from the economically challenged backgrounds, are not deprived of higher education due to lack of financial support.

Upto July 2019, ELTF has responded to more than 30,000 email queries, providing clarifications and guidance. More than 6,000 grievances have been forwarded to higher authorities concerned for examination. Thousands of students across the country have been benefitted by the services of ELTF, which works quietly for the mutual benefit of students and banks.

Founders & Convenors	: Shri Prime Point Srinivasan & Shri Natarajan Raman
Co-Convenors	: Shri M Rajkumar and Shri G A Prithvi
Goodwill Ambassador	: Smt. Kavipriya Anandan
Advisors	: Smt. Susan Koshy, Dr R Jagannathan, Dr T V Gopal Shri R Nurullah
Website	: www.eltf.in
Email	: info@eltf.in
Facebook Page Handle	: EducationLoanTaskForce
Google Play App	: Education Loan India or ELTF





2010



2011



2012



2013



2014



2015



2016



2017



2018



Meeting with Hon'ble
Speaker on 5th May 2016



2019

By the end of the 14th Lok Sabha, there was severe criticism about the functioning of the Lok Sabha. Even the then Speaker Shri Somnath Chatterjee during his valedictory address for the 14th Lok Sabha, was expressly emotional and registered his unhappiness over the frequent disruptions of the Parliament. The entire nation was criticising the behaviour of the Parliamentarians. Whenever a mock Parliament session was held in colleges and schools, the students started the sessions by throwing chairs and creating a pandemonium in mock imitation. Meanwhile, the elections for the 15th Lok Sabha were announced.

Top performers of 14th Lok Sabha

On the suggestion of former President of India (late) Dr. APJ Abdul Kalam, Prime Point Foundation and the Editorial Team of the eMagazine PreSense decided to come out with a positive aspect of democracy and recognise the top parliamentarians, who discharged their constitutional duties quietly. Around the same time, the eMagazine PreSense (published by the Foundation) covered the theme, 'Celebrate Democracy' in its March 2009 edition. While the media and the nation at large were criticising the Parliamentarians, the top performers of the 14th Lok Sabha were identified from the data released by the PRS Legislative Research (PRS India) and featured them in PreSense with their interviews.



Cover of March 2009 edition
of ezine PreSense

Shri Kharvendhan (Congress, Palani, Tamil Nadu), one of the top performers was featured in the cover of eMagazine then. Shri Anand Rao Adsul (Shiv Sena, Amaravathi, Maharashtra) secured the first position in the Questions category and in the Overall Performance tally for the 14th Lok Sabha. The interviews of all top performers in audio and text formats were carried in the eMagazine PreSense. Dr Abdul Kalam himself gave his exclusive interview on the role of Parliamentarians. This was the humble beginning of recognizing the top performers of Lok Sabha.

15th and 16th Lok Sabha

After the formation of the 15th Lok Sabha in 2009, the Editorial Team of PreSense decided to honour the top performing Lok Sabha Members in (a) Questions (b) Debates and (c) Private Members Bills, in person at Chennai. Two MPs, Shri Hansraj (Chandrapur, Maharashtra) and Shri Ramasubbu (Tirunelveli, Tamil Nadu) were personally honoured at the Thakkar Bapa Vidyalaya, Chennai on 1st May 2010 in the presence of eminent citizens of Chennai. Former Chief Election Commissioners of India, Shri T S Krishnamurthy and Shri N Gopalaswamy felicitated them. Dr. Abdul Kalam gave a speech live over phone from Delhi. The news was carried nationwide by the media.

The second awards function was held at Thakkar Bapa Vidyalaya, T. Nagar, Chennai in May 2011. The awardees were selected based on the cumulative performance of the Lok Sabha Members in various parameters like Questions, Private Members Bills and Debates.

From 2012 onwards, the Indian Institute of Technology, Madras joined as partner and all the Awards functions were held at the IIT Madras Auditorium from 2012 to 2018.

The awards for the 16th Lok Sabha were presented during the 10th Anniversary held on 19th January, 2019, in the Durbar Hall, Raj Bhavan, Chennai by Shri Banwarilal Purohit, Hon'ble Governor of Tamil Nadu in a ceremonial event. This event was telecast live by Doordarshan nationwide.

From 2016 onwards, Rajya Sabha Members were included in the Awards category. The outstanding performers of the Rajya Sabha, who retired in the preceding year, were honoured with Sansad Ratna Awards. In 2018, another category of Award for 'Standing Committees' for their outstanding contribution, was introduced.

Since the inception of the Award, 60 Parliamentarians have been honoured. Many eminent personalities like Mr T S Krishna Murthy (Former Chief Election Commissioner of India), Shri N

Gopalswamy (Former Chief Election Commissioner of India), Shri N Vittal (Former Central Vigilance Commissioner of India), Shri Era Chezian (Veteran Statesman), Shri Gopalakrishna Gandhi (Former Governor of West Bengal), Dr K Rosaiah (Governor of Tamil Nadu), Justice Shri A R Lakshmanan (Retired Judge, Supreme Court), Dr C Rangarajan (Former Governor of Reserve Bank of India and former Governor of Andhra Pradesh), Dr P Sadasivam (Governor of Kerala), Shri M K Narayanan (Former Governor of West Bengal) and Shri Banwarilal Purohit (Governor of Tamil Nadu) have participated in the events and presented the Awards.

Sansad Ratna Awards are presented on behalf of 'civil society'.

Jury Committee

The selection of awardees is done in a transparent manner by a Jury Committee of eminent Parliamentarians based on published parameters and rules.

16th Lok Sabha: The Jury Committee was headed by Shri Anandrao Adsul (5th time MP – Shiv Sena, Maharashtra) with Shri Hansraj G Ahir (Hon'ble MoS Home, BJP, Maharashtra) and Shri Arjun Ram Meghwal (Hon'ble MoS Parliamentary Affairs, BJP, Rajasthan) as Members for selection of the awardees for the 16th Lok Sabha. All the three Parliamentarians were outstanding performers and recipients of 'Sansad Maha Ratna' Award for the 15th Lok Sabha.

17th Lok Sabha: The Jury Committee is headed by Shri Arjun Ram Meghwal (Hon'ble MoS Parliamentary Affairs, BJP, Rajasthan) with Shri N K Premachandran (RSP, Kerala) and Shri Shrirang Appa Barne (Shiv Sena, Maharashtra) as Members.

These Jury Members were outstanding Parliamentarians of the 16th Lok Sabha.



(L to R) Shri Shrirang Appa Barne,
Shri Arjun Ram Meghwal,
Shri N K Premachandran

Appreciation



MESSAGE

It is a pleasure to know that the 9th Sansad Ratna Award Ceremony is being organized by Prime Point Foundation on 9th June 2018 at IIT Madras to honour the best performing parliamentarians. Congratulations to all the eminent parliamentarians who are being recognized on this occasion for their contribution to Parliamentary proceedings.

I also congratulate the foundation for their proactive initiatives in honouring the exemplary performances of our legislators and for promoting a dynamic culture of debate and discussion.

Best wishes for the function and for all the new initiatives of the foundation.

(Narendra Modi)

New Delhi
08 June, 2018

Shri K. Srinivasan
Chairman, Prime Point Foundation

Prime Point Foundation and PreSense have been receiving greeting and appreciation messages during every Award event from various leaders, including the Vice President of India, the Speaker of Lok Sabha, Governors and Chief Ministers of various states.

The Hon'ble Prime Minister had also sent a message in 2018. (picture) During the 10th Anniversary in 2019, greeting messages were received from the Hon'ble Vice President and the Hon'ble Speaker of Lok Sabha.

The Only Award by the Civil Society

This is the only Award presented by the citizens and the Indian civil society to honour the performing Parliamentarians. Many eminent citizens, including retired bureaucrats, professionals, social workers and academicians of Chennai are associated with the Awards Committee.

Shri T S Krishna Murthy, Former Chief Election Commissioner of India is the 'Patron' of the Awards Committee.

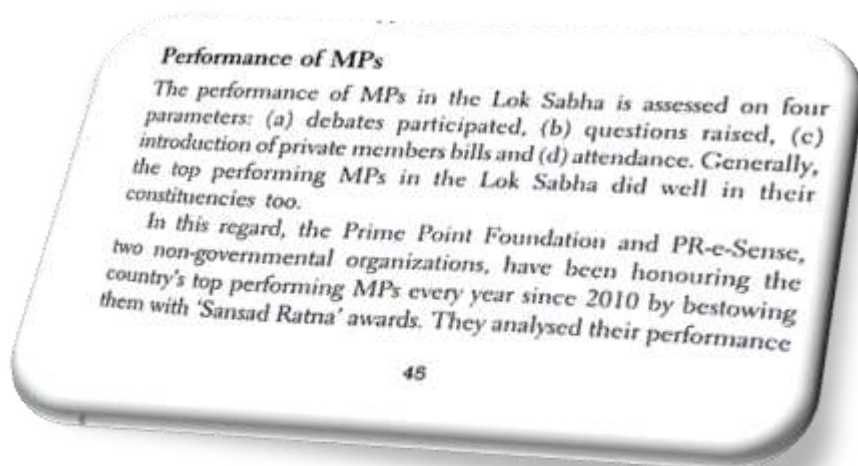
Appreciation by Dr. APJ Abdul Kalam

The Former President of India (late) Dr APJ Abdul Kalam had guided the Sansad Ratna Team in conceptualising the theme and

till his final days. He had addressed and launched the first Awards function in May 2010 over phone, live from Delhi.

He had also devoted a full chapter on the Sansad Ratna Awards in his book, 'A Manifesto for Change' and carried the interviews of Sansad Maha Ratna Awardees of 15th Lok Sabha (picture below).

Sansad Ratna Awards Committee



Patron	:	Shri T S Krishnamurthy, Former Chief Election Commissioner of India
Founder & Chairman	:	Shri Prime Point Srinivasan Publisher and Mg. Editor, PreSense
President	:	Shri Bhawanesh Kumar Deora
Vice Presidents	:	Shri R Nurullah, Shri Sivakeerthi, Shri Narayanaswamy, Shri Venugopalan Mohan, Shri N V Kannan
Secretaries	:	Shri G A Prithvi , Shri Ramesh

Sethuraman, Ravisenthil Kumar

Addl. Secretaries : Shri U Sridhar Raj, Smt G Priya
Dharshni, Dr T Shivakumar

Treasurer : Shri N Rajaji

Advisors : Dr Sudarshan Padmanabhan,
Dr R Jagannathan,
Smt Susan Koshy

Website : www.sansadratna.in

E Mail : info@sansadratna.in

Google Play APP : Sansad Ratna Awards



Digital Journalists Association of India (DiJAI)

'Digital Journalists Association of India' (DiJAI), the third initiative of the eMagazine PreSense, was started as a Non Profit Public Trust in Chennai, India in March 2016, to hone the professional skills in digital journalism among the professionals and students. The Indian Institute of Technology (IIT) Madras is its knowledge partner. DiJAI was inaugurated at IIT Madras on 2nd April 2016.

DiJAI has been organising workshops and seminars to enhance the digital journalism skills of the professionals. DiJAI has also started its Student Chapters in various colleges. In July 2018, DiJAI conducted a one-month apprenticeship programme on a trial basis to four students from one of the colleges, providing mentorship and guidance in digital journalism via teleconferencing.

The following are the office bearers:

Founder	& :	Shri Prime Point Srinivasan,
Chairman		Publisher & Mg. Editor, PreSense
President	:	Shri E Perumal alias Bharathi
		Thamizhan, Online Editor, Tamil Hindu
Vice President	:	Shri R Nurullah, Senior Tamil
		Journalist
Secretary	:	Smt. Susan Koshy,
		Editor in Chief, PreSense
Treasurer	:	Shri V Rajendran, Editor, PreSense
Trustee	:	Dr Sudarshan Padmanabhan,
		Associate Professor, IIT Madras.
Website	:	www.dijai.in
Email	:	dijai.india@gmail.com



Digital Security Association of India (DiSAI)

Digital Security Association of India (DiSAI) is a non-profit Public Trust and NGO (Non-Government Organisation), with Trustees holding expertise in technology and the academic field on its board. This is the fourth initiative of the eMagazine PreSense. DiSAI was launched in IIT Madras on 17th Dec 2017 at one of their National Conferences.

DiSAI is formed to create awareness about the safety and security of data in communication including the other associated aspects like ethical security, societal security, and legal security, which assume greater significance. DiSAI has organised several workshops on digital security. From May 2019, DiSAI has been publishing a monthly eMagazine 'DiSAI Quest' with various articles on digital security.

DiSAI has also taken up some of the important issues relating to national security directly with Home Ministry for their consideration.

The following are the key office bearers:

Founder & Chairman	: Shri V Rajendran, Editor, PreSense and Cyber Law Consultant
President	: Dr R Jagannathan, Former Vice Chancellor, Middle East University, UAE
Vice President	: Shri U P Prakasham, Entrepreneur
Secretary	: Shri Ramesh Sethuraman, IT Professional
Editor, DiSAI Quest	: Shri C Badri
Website	: www.disai.in
Email	: info@disai.in



Next Gen Political Leaders (NGPL)

Next Gen Political Leaders (NGPL) is an apolitical and a 'way forward' off-shoot of the Sansad Ratna Awards Committee. This is a unique and 'first of its kind' initiative in India to bring together young leaders from all political parties and develops competitive leadership qualities. NGPL was launched on 20th October 2018 in a workshop at Madras Management Association (MMA).

NGPL organises workshops and seminars, and gets experts in the field, eminent Parliamentarians, Legislators and retired constitutional authorities to train, guide and mentor young politicians and aspirants. This opportunity gives the participants the scope to understand the aspects of Indian Constitution, Parliamentary functions, Legislative and Local bodies, rules and procedures.

Discussing political ethics and political etiquette will orient young political leaders and aspirants to make a better and promising democratic India. NGPL plans to open a chapter at Delhi soon.

Mentors	: Shri T S Krishnamurthy, Former Chief Election Commissioner of India Shri S K Kharventhan, Former MP (Outstanding Parliamentarian) Shri C H Sekhar, Former MLA (Outstanding Legislator)
President	: Shri U Sridhar Raj
Secretaries	: Shri M R Elangovan, Smt G Priya Dharshni, Dr T Shivakumar
Website	: www.ngpl.org.in
Email	: ngplforum@gmail.com

Section I: General and Exclusives

**“Parents and teachers have to set an example of the value system”
– Dr APJ Abdul Kalam**

In an exclusive interview with K Srinivasan, Editor-in-Chief, Dr APJ Abdul Kalam, former President of India spoke on the various contemporary issues faced by the youth. This interview was recorded during the release of the Golden Jubilee issue (April 2010) of PreSense. Excerpts:



Q: In this technology-driven global village, everything is looked at from the RoI (Return on Investment) angle. Packaging is the name of the game. We see

a consistent degeneration in the society's value system. The present education system produces only graduates and not human beings. What, according to you, should be done to bring back the values in life, and live with pride?

A: Parents and teachers have to set an example of the value system. Schools can conduct moral science classes at least once in a week to talk about great personalities who demonstrated the value system to the society. The school curriculum should include selfless societal work such as teaching the needy, planting trees, caring for the old, orphans and differently abled. These actions will promote values in the minds of the young.

Q: Talking of unsung heroes - the media across the canvass has become a product. *Ipsa facto*, the thrust is only on selling. In such a case, the 'unsung heroes' will forever be confined to oblivion. How do we remedy the situation?

A: Organisations like Prime Point Foundation should initiate action to remedy this situation.

Q: We do not have the kind of political leaders like Mahatma Gandhi, Rajaji, Nehru, Kamaraj and Sardar Patel

anymore. The youth get easily frustrated with the political system and many do not even participate in the election process. What do you think should be done to make the young people participate in the political process and to bring about a transformation in the current situation?

A: The major parties should recruit educated youth with passion for societal work, in the party structure. These members must be put through special training for developing unity of minds and development politics. They will be leaders who will make India a land of prosperity with a value system.

Q: After graduation, many want to take up jobs. They are more driven by the immediate money and monetary perks provided by the employers. They do not want to become entrepreneurs. How can they be inspired to become 'employment generators' rather than just 'employment seekers'?

A: It is not true. When I addressed the participants of the Confluence seminar at IIM Ahmedabad, I asked the question, "how many of you would like to become an entrepreneur?" Almost 75% of the audience responded in a loud affirmative. The trend is changing. We have to make the system and procedures simple and user friendly for an entrepreneur to flourish.

Q: A personal question. Politics and bureaucracy are generally perceived as the most corrupt fields in our country. You were working in this system very closely for many decades. In spite of your proximity to the system, you have remained 'above board' and many young people regard you as a 'role model'. What makes people like you – the straight forward and honest ones - survive and come out unscathed?

A: I maintained the principle "work with integrity and succeed with integrity". Do not be worried about others. You follow what your conscience says.

Source: April 2010 issue of Ezine PreSense

“Youth Should Create Sustainable Rural Development Model” – Dr APJ Abdul Kalam

(This is the text of the speech delivered by Dr APJ Abdul Kalam on 17th January 2009, while addressing the members of 'Action 2020 – UnConference' organised by Ezine PreSense)

Dear members of “Action 2020 - UnConference 2009”, my greetings to all of you. I am very happy to communicate with all of you telephonically, when you have assembled at Chennai, discussing about how to achieve Vision 2020 with peoples' participation.

On 15th January 2009, I inaugurated the Youth Meet at Pune and interacted with nearly 1500 young people. The theme, I selected for the youth was “The ignited minds of the youth is the most powerful resource on the earth, above the earth and under the earth”. Here it was important to remember the powerful call given by Swami Vivekananda: “how has all the knowledge in the world been gained but by the concentration of the power of the mind? The world is ready to give up its secret if we only know how to knock, how to give it the necessary blow. The strength and the force of the blow come through concentration. There is no limit to the power of the human mind. The more concentrated it is, the more power is brought to bear on one point. That is the secret”.

When I put forth this thought to the young, there was tremendous enthusiasm and the youth repeated the statement. Then I brought out the power of three great minds:

“It doesn't matter who you are; you will achieve if you work for it”. Mario Capecchi – a street boy who became a noble prize winner in 2007 for his remarkable work on the gene that can be used to cure diseases such as cancer.

Failure did not deter him. Srinivasa Ramanujam with his optimum capability generated his own equations and became an expert in the number theory. He failed in his FA Exam, but he did not bother. Mathematics became his friend. He saw divinity

associated with each number. He became a renowned number theorist and a great mathematician recognised by the world of mathematics including the Royal Society.

"Plant a tree and plant an idea". Prof Wangari Maathai had a passion for the environment and bio-diversity and has been contributing to the sustainable development and growth of Planet Earth through tree plantation. She was instrumental in getting 31 million trees planted in 20 countries in the African region. She won the Nobel Prize for this unique contribution towards environmental upgradation. With these three thoughts, "It doesn't matter who you are, you will achieve if you work for it", "Failure didn't deter him" and "Plant a tree and plant an idea", the 1500 youth at Pune looked ignited; they were all asking, "tell us, what we can give?"

I asked the audience, "Why don't you, young boys and girls, share your experience?" One girl got up and introduced herself as from rural Maharashtra. She said, "Mr. Kalam, let me share with you what my classmates and I have done. There is a hospital in our small town, where the entire place is dirty and the patients are not at all cared for. Seeing the situation, the student community decided to go to the hospital once a week to clean up the entire place including the toilets. And we also provide necessary help to the patients such as communicating with their relatives, drying their clothes, buying their medicines and giving them a feeling of cheer by talking to them." What a noble mission?

A series of questions came in afterwards. The main question was what the youth could do to eradicate corruption in our system. Here I gave my experience at Adichunchunagari Mutt in 2005 when I addressed 50,000 students and thousands of parents in the presence of spiritual leaders and political leaders. After my address on Vision 2020, a girl named Bhavani got up. She said she was studying bio-science in the '10+1' class, and she wanted to know from me and the leaders sitting on the dais, what action the youth should take to eradicate corruption, so that we could live in a corruption-free society. The funds allotted for development could then reach the citizens fully. There was no response to this question forthcoming from any other quarter, so

I had to answer. I said, "Dear Bhavani, your question is very important in the present context of the nation. You know, we are a population of one billion. We live in 200 million homes. It is estimated that 30% of the homes may be corrupt, that means 60 million homes are corrupt. Each home has on an average of 5 members: Father, mother, two sons + one daughter or parents + two daughters + one son. Now I have got a question for you Bhavani. In case your parents, particularly your father is unfortunately corrupt, will you go to your father and say "Father, please stop corruption - Our scriptures will not allow that, our teacher taught us so." Will you say this to your father? There was pin drop silence.

Then came the surprise. Almost all the children got up and said in a chorus, "We can do it. We will stop our parents if they are corrupt." I could not believe this. Of course, I turned to the thousand of parents who were sitting there. I asked the mothers particularly, "How will you react to your daughter or son coming to you and saying that you should stop your corrupt actions?"

After some thought, a mother gave the following statement, "Mr. Kalam, so far no one has asked us such a direct question. But I want to tell you one thing on behalf of womanhood that daughters and sons have a unique relationship with their parents. They have a great and grand tool called mutual love and affection. If our child comes and tells us that we are corrupt, it is a great insult to me and my husband. We have to change, we have to change, we have to change." Then the whole gathering took the oath, "I will lead an honest life, free from all corruption and will set an example for others to adopt a transparent way of life".

I asked the youth of Pune, what is your reaction? They said, "We would like to take the same oath and abide by it." The entire hall reverberated when they took the oath. I realised that the Vision 2020 of transforming India into a developed nation will definitely succeed with such a committed youth power. Mr Prime Point Srinivasan, you may kindly see my website, www.abdulkalam.com and click PURA as a business proposition. Here, many successful operational PURAs in different parts of the

country have been described. Our young participants can definitely create such sustainable rural development model in their own area which will accelerate the realisation of our development of Vision 2020.

(Source: January 2009 issue of Ezine PreSense)

“Wiki Respects Every Individual's Contribution” – Jimmy Wales, Founder of Wikipedia

K. Srinivasan, Editor in Chief of PreSense interviewed Jimmy Wales, Founder of Wikipedia on 25th February 2007 during his visit to Chennai. Excerpts:

Q: Good morning Mr. Jimmy. What made you to start Wikipedia?

Jimmy: I have been watching the growth of the free software moment, i.e. the open source software movement, and I have seen people coming together online to make software products of very high quality, all using free licences. So, people can copy, modify, and re-distribute the work commercially and non-commercially. Then I realised this is a new social model which will allow the people to collaborate on anything and all kinds of things. Therefore, I thought 'encyclopaedia' would be a good project. I wanted a free online encyclopaedia available to all. That was the beginning of the idea.



Q: In which year did you start Wikipedia?

Jimmy: Wikipedia was started on 15th January 2001. Prior to that for two years, I had a project called “Nupedia”, which had the same objective as Wikipedia, in terms of a free licensed encyclopaedia with thousands of volunteers, but I did not have the idea of the “Wiki” editing model then. So, it was designed as a very traditional top down model that showed something generic.

Q: So, how do you ensure the credibility of the information, and integrity?

Jimmy: There is a very good community of users very actively

and meticulously policing the site and they elect administrators amongst themselves. There are many mechanisms too on the website that allow the community to exercise controls and quality. For example, every single change is recorded in the "recent changes" page and all of the past versions of the articles are saved forever so that if someone comes up and makes an article that is of a lower quality than it was before, someone can restore the best version. Several little techniques like that empower the community to actually build something that is more valuable.

Q: What would happen if somebody gives wrong information or manipulates the information?

Jimmy: Typically, that is a multiple step process. We are a very friendly and welcoming community and try to help people understand what we do. If somebody comes in and puts in some wrong information, say as a joke, they will get a preliminary warning that will say, "Please do not do this to Wikipedia. In our effort to create a high-quality encyclopaedia, we found your action inappropriate". You would be surprised that many people, when they read this would say "You know, actually I probably shouldn't have messed with Wikipedia." Beyond that, if they repeat it, they can be blocked from editing and the community can then revert to the previous version.

Q: How can it help the corporate world?

Jimmy: Many companies are now finding Wiki very useful for their employees to share the information quickly. The word "Wiki" comes from the Hawaiian word "Wiki Wiki" which means "quick". It is a quick collaboration. And so, one of the challenges that many companies face, particularly the large companies, is how to get the information flowing through the organisation in a fast and effective manner. Many times, companies make poor decisions simply because one part of the organisation has some information that the other part does not. The idea of Wiki inside a company is to enable people to really share information in a faster, broader, and simpler way. Many companies find Wikipedia very useful.

Q: Do you have any advice for the corporate world?

Jimmy: I think the best advice is to experiment with Wiki, respect the medium and understand what makes Wiki successful viz. "respect for every individual's contributions", so that even if someone in the company is doing something that is not so great, if you have a positive attitude of encouraging them, the others will see this and think for themselves about posting information. If you have a very hierarchical company, Wiki will not work for you because the employees will be too afraid to type something that may upset their bosses. If you can accept that, Wiki will be an open process and it can work very well.

Q: What inspired you to start Wikipedia?

Jimmy: Originally, as I said it was the open source software, i.e. free software movement. As a child, when I was growing up, I had parents who really strongly emphasised about education. I went to a very small private school. There were only four children in my grade! It was a one-room school-house, very old fashioned, and small. I had lots of fun when I used to read the encyclopaedia. I used to read the words in Encyclopaedia Britannica. As a child I always had the idea of broad information and just loved reading.

Q: How do you see the future of Wiki in another 5 to 10 years?

Jimmy: I think one of the most important things that you are going to see in five to ten years is the editing process becoming a lot easier, a lot smoother and a lot more approachable by people who are not necessarily IT specialists. I think that is probably the most important thing that you are going to see. And I think you are going to see that Wiki is used for more things that are useful. You will realise that people can write for Wiki and can do fictions and all kinds of things in Wiki that I would have never expected, but I'm seeing all this creativity emerge online. I actually don't know. I think we have to watch and see what people come up with.

Source: February 2007 issue of Ezine PreSense

“You need to be really passionate about making something to happen” - Dr Vinton G. Cerf, Father of Modern Internet

Thirty years ago, on 1st January 1983, the world entered a new era of communication with the birth of 'Modern Internet' which we use today. This communication revolution was enabled by the TCP/IP protocol, developed by Dr Vinton G. Cerf and Robert E. Kahn. They are now regarded as 'Fathers of Modern Internet'.



In those days, ARPANET was the wide-area network sponsored by the US Defence Advanced Research Projects Agency (DARPA). It went live in 1969, when Vinton Cerf was an ARPANET scientist at the Stanford University. The military became interested in a common protocol as different networks and systems using different and proprietary protocols began to hook up to ARPANET, and they found that they could not talk to each other easily.

On 1st January 1983, the new Internet Protocol TCP/IP, which replaced the older system, was accepted as the standard, and modern Internet was born. The Internet, a revolutionary and cost-effective communication system has transformed the lives of billions of people across the world. Using data "packet-switching", the new method of linking computers and sharing information paved the way for the arrival of the World Wide Web.

Dr Vinton G. Cerf (70), the main architect of Modern Internet, is presently the President and CEO of Google Special Services Inc. and Chief Internet Evangelist at Google. He visited Chennai in mid-January 2013 to participate in the annual meeting of the Association for Computing Machinery (ACM) – India Council. Dr Vinton is the International President of ACM. We had the opportunity of recording his inspiring interview for PodUniversal and PreSense. (Link for his interview is given at the end of this article).

While people with less qualification and achievement pose themselves as great men, this legendary person, who revolutionised the entire globe with his invention, looked simple and unassuming. In the 45 minutes of conversation with him, he came across as a down-to-earth man.

Dr Vinton Cerf has won hundreds of national and international awards for his achievement. He is the recipient of the 'Turing Award' for Technology, equivalent to the Nobel Prize, in Computing. Recently, President Obama appointed him as member of the National Science Board in the US Government.

Dr Vinton suffers from a hearing impairment from an early age, and he later attributed some of his interest in computer networking to its promise as an alternative communications channel for the hearing impaired. His personal disability triggered a great communication revolution in the globe.

In an exclusive interview with K. Srinivasan, Editor-in-Chief of PreSense and PodUniversal, Dr Vinton said that at the time of the invention, his team had high hopes that this would become a powerful infrastructure in future. "I think those hopes have been largely realised" he added with pride.

On computer security, he said, "There is still plenty of work to be done on the technical side and on the training side to get users to adopt safer communication practices." He suggested the 'two-factor authentication' for the safety of the users.

On his passion, his achievement, and his message to the Indian youth, he said, "The simple message here is that you need to be really passionate about making something to happen and you better be prepared to be patient and persistent because some ideas, the Net included, will not be widely accepted." In the same breath, he also appreciated the Indian entrepreneurs for exporting their skill, talents and inventions to the rest of the world.

PreSense is proud to feature him as 'Man of the Month' (though he is the Man of the Century) in the current issue, when the world celebrates the 30th year of modern Internet.

Please listen to his interesting Podcast through the link given below:

<http://youtube/V6VOAAQEyE0>

Source: January 2013 issue of the Ezine PreSense

**“Enhance Innovation and Invest in R & D” –
Dr APJ Abdul Kalam**

PreSense celebrated its Second Anniversary in Feb 2008. In an exclusive podcast interview with K Srinivasan, then Editor in Chief, Former President of India, Dr A J Abdul Kalam shared his views on "Role of Indian Industries in Realising Vision 2020". Excerpts:

Prime Point Srinivasan, my greetings to all of you, particularly for the e-magazine which you have started. I am glad that it is doing very well.

Now the topic is the role of Indian industry in realising India Vision 2020.

National economic development is powered by competitiveness. Competitiveness in turn is powered by Technology and Innovation. Indian Industry has to build International Competitiveness. There is a direct relation between Innovation Index and Competitiveness Index.

Today, India ranks 48th in the Global Competitiveness Index and 23rd in the Innovation Index. The Indian industry has to work to achieve a rank above 10 in the Global Competitiveness Index. That is my view. This will need enhancing the innovation and also investing in Research and Development to generate Technology locally.

Another aspect is “Profit with Integrity”. Profit with Integrity should become the motto of corporates, and it is essential for sustainable growth.

We have now achieved a GDP growth rate of 9%, which has to be increased to beyond 10% per annum. This should sustain over a period of a decade before India can become a fully developed nation.

When we grow, we have to look for inclusive growth. To spread the growth to the rural sector, we have to create nearly 7000 PURA (Providing Urban amenities to Rural Areas) Complexes covering about 6,00,000 villages, where 70% of the people live. Creation of PURA Complexes will need the active support of Corporate India. PURA Complexes help develop PURA Enterprises for local talents. This will ensure faster development of the whole nation.

Another aspect is fulfilling Corporate Social Responsibility (CSR). Two major areas of CSR are:

- Providing quality education to all eligible candidates with employment scheme; and
- Providing health care to all the citizens.

In addition to the two major areas, corporates can consider providing quality employment to 'differently abled persons' by imparting quality training and skills. The corporates should contribute towards bridging the rural-urban divide and also facilitate the harmonious working of the three sectors, namely, Agriculture, Manufacturing and Service Sectors.

Emphasis in those areas, which I have suggested will enable faster development of the country leading to equity, prosperity and justice to all the citizens of the country.

Source: February 2008 issue of Ezine PreSense

“Building a Good Image is as Crucial as Doing a Good Business Plan or Technology Strategy” –

Dr Y S Rajan, Co-Author of the book India 2020

Dr Y S Rajan is the co-author of the book, India 2020 along with Dr APJ Abdul Kalam. He is one of the well-known scientists of the country. In an exclusive interview for the inaugural issue (Mar 2006) with Ms Meera, Dr Rajan shared his views on the need of the communication. Excerpts:



Q: How do you assess the prevailing environment in the communication industry (PR/Corpcomm), particularly in India? How has it evolved in the last five years?

A: In terms of utilisation of technological tools in India, Corporate Communication (CC) have picked up well. In terms of soft skills much more can be done, especially if our communicators can draw from our cultural ethos and use the forms of native creativity. As for contents, CC has a long way to go. Presently, the audience base is very narrow.

Corporates should touch the heart of people through communication, generating positive feelings. But this is to be done carefully. Unnecessary and unreal hype will boomerang. If we do not project the real performers, and instead rely on their conventional icons alone, the faith and confidence of their consumers will be eroded. Merely showcasing celebrities as their ambassadors has its limitations.

Therefore, there is plenty of scope for breaking new grounds of communication, making it (a) a democratic dialogue and (b) a developmental disseminator.

Q: How can communication help the giant Indian corporate sector achieve global leadership?

A: There are success stories of the giant Indian corporate sector, and even of smaller ones as ICT, where global presence for trade, service and supply-chain-presence have been achieved. In spite of it, there are several misconceptions and concerns about India - whether it is about the quality of the products sold or reliability as a trade partner. Communication is one medium through which we can overcome these apprehensions. The strength, the uniqueness and the relevance of the Indian companies need to be showcased to the foreign countries to convince them and their communities of the dependability of the Indian corporate sector.

For example, the message to be conveyed needs to be that "We are not here for marketing alone but also to improve the quality of your life". IBEF (India Brand Equity Foundation) a joint effort of the Ministry of Commerce & CII (Conderation of Indian Industry) is helping the corporate and the communicator in building a positive image branding. A good corporate image building plan is as critical as a good business plan or technology strategy.

Source: March 2006 issue of Ezine PreSense

**“Indian Election Commission is the eighth wonder of the world” –
T S Krishnamurthy, Former Chief Election Commissioner of India**

In these days, when many of the companies break their heads about communicating with their few hundreds of internal stakeholders involved in projects, an organisation in India successfully communicates and completes a 'mega project', which



involves 5 million internal stakeholders, within 60 days. That is the Indian Election Commission, whose functioning can be classified as the 'eighth wonder of the world'.

In India, the Election Commission holds general elections once in five years to elect 'legislatures' for the Union Government's Parliament and 35 State Governments and Union Territories. During the general elections, the Indian Election Commission involves around 800

political parties, 5 million election officials, 700 companies of para military forces, 670 million voters, 800,000 polling booths and one million Electronic Voting Machines (EVMs). The entire precision-fine "world's largest election" is completed within 60 days in the presence of national and international media to the satisfaction of all stakeholders and even the judiciary. Similar operations are being carried out for the assembly elections of State Governments.

The entire internal communication model adopted by the Indian Election Commission has raised the eyebrows of the entire world. In an exclusive interview with Narrendiran and Sakthi Prasanna of PreSense, Mr T S Krishnamurthy discloses the strategies of the communication. Mr Krishnamurthy who retired recently as Chief Election Commissioner of India, has successfully conducted one general election and several state elections during his tenure. Presently, he is being invited by many governments across the world to share his suggestions.

It was during his tenure that the election operations in India were

made cent per cent electronic, the only one of its kind in the world to use EVMs for such a large voter population. Excerpts from his interview:

Q: What are your strategies to communicate to 5 million government officials, who act as election officers during the elections?

A: We have a two-tier system of communication with our officials. In the first tier, the Head Quarters of the Election Commission at Delhi provides training inputs to 'observers' who are deputed to oversee the election process, and other officials who in turn train at field level. In the second tier, the ground level officials are trained periodically by District Collectors. In these trainings, they are briefed and provided booklets (English and local languages) on the procedures, rules, use of EVMs etc. The entire training process is time bound and well monitored. Now, in India, we have around 4 million officials who can handle the election process efficiently.

Q: How do you create awareness amongst the voters about their rights?

A: In India, we have around 670 million voters spread across the country, including remote places. The Election Commission uses various tools like demonstration, film shows, posters and the print/electronic media to create awareness among the voters. Presently, in India, around 60 percent of the voters exercise their franchise. This does not happen even in developed countries. Our officials visit even remote places through different modes of transport like boats and elephants, to create awareness and conduct elections.

Q: How do you communicate with political parties?

A: We meet the representatives of all political parties every year and discuss with them about the various processes involved. All the good suggestions are taken up. We have an online newsletter "Election India". The website www.eci.gov.in is a very informative site, with more than 10,000 pages of content. Once the election process starts, the Election Commission briefs the media on a

daily basis to update the stakeholders. The entire operation is done in a transparent manner using electronic voting machines, in the presence of all media. This has improved our credibility globally. With the use of technological tools, we are able to implement, probably the largest 'Face to Face' communication exercise, successfully.

Source: June 2006 issue of Ezine PreSense

Saluting ISRO – India's Pride – Dr Radhakrishnan, Chairman, ISRO: Scientist, Spiritual Person & Artiste

Launch of GSLV D5



GSLV D5

After 20 years of continued research and a few failures, the Indian Space Research Organisation's (ISRO) team of scientists successfully launched the GSLV-D5 rocket using indigenous cryogenic engine, on 5th January 2014. They also successfully injected the 1982-Kg GSAT-14 communication satellite into its orbit.

Earlier on 5th November 2013, the ISRO team successfully launched *Mangalyan*, Mars Orbiter Spacecraft, which is now on its way to reach Mars by September 2014.

Both these events are significant milestones in the Indian space programme and ISRO has made every Indian proud. The credit goes to the dedicated and committed team of scientists under the leadership of Dr K Radhakrishnan, Chairman of ISRO.

Dr Radhakrishnan, a Team Builder and Leader

Dr Radhakrishnan (64) hails from Irinjalakuda, an ancient town near Thrissur (Kerala). He joined ISRO in 1971 as an engineering graduate. He completed his post-graduation in Management from the Indian Institute of Management (IIM), Bangalore and acquired a doctorate from the Indian Institute of Technology (IIT), Kharagpur, while working in ISRO.

After serving in the space organisation at various levels, he took over the chairmanship of ISRO in November 2009. As chairman, he has been consistently displaying leadership qualities.

In April 2010, when the much anticipated indigenously built GSLV D3 mission failed due to a technical error in the Indian Cryogenic Stage, Dr Radhakrishnan appeared before the waiting media and explained the reasons, with an assurance to the nation that the

mission would be successfully re-launched within a year. Within three months when the PSLV was launched successfully, Dr Radhakrishnan introduced his team of key persons involved in the project, to the media and encouraged them to speak to the media about the mission. This gesture reflected the true spirit of leadership and teamwork of Dr Radhakrishnan.

During the recent launch of GSLV D5 with indigenous cryogenic engine, he paid tributes to Dr U R Rao, former ISRO chairman and the brain behind the proposed mission 20 years earlier, and gave due credit to him during the media conference. When the Prime Minister and later the President of India, after witnessing the successful launch of the two space missions, met Dr Radhakrishnan at Sriharikota, Dr Radhakrishnan had his entire team of scientists with him to meet them. On 25th January 2014, the Government of India honoured him with the Padma Bhushan Award for his contribution to the nation.

Exclusive Interview with PreSense - Future Plans

In an exclusive telephonic interview with K Srinivasan, Editor-in-Chief of the ezine, PreSense, Dr Radhakrishnan said that India currently held the 6th global position in space mission achievements, after USA, Russia, Europe, Japan and China. He also proudly added that currently, India ranked topmost in 'space applications' and that many countries were seeking guidance from India in this area of expertise. He said that India's space programme was 'application-oriented' in areas of education, disaster management, telecommunication, environmental protection, and the like.

When asked about future plans, he said that ISRO was already working on high power communication in K-A band, which would be three times higher in output than the present one. In microwave remote sensing, he said that ISRO was moving towards X, S and L bands, in addition to C band. ISRO would be launching *Chandrayan II* with indigenous lander and rover. On the launch vehicle side, GSLV Mark 3, which could take 4000 kg payload (as against the present capacity of 2200 kg) would be launched soon. Dr Radhakrishnan said that GSLV Mark 3 would

reduce India's dependence on other countries in satellite launch. An experimental flight of GSLV-Mk 3 is planned to study its performance during the crucial atmospheric phase of the flight and here the cryogenic engine will not be activated.

"ISRO is planning its first developmental flight to put a satellite in the orbit by 2016. We are also developing high power 'semi-cryogenic engine' with 200-ton thrust. With these, we can move to the next level of launch vehicle to carry 6 tons to 10 tons. Our team is doing the 'phase zero study' for this purpose", said Dr Radhakrishnan proudly.

A Spiritual Person and an Artiste



being spiritual. He visits the Tirupathi Temple, before and after the launch of every vehicle. "I have been visiting the temples since my childhood days. I have trekked to Sabarimala 52 times, starting from my childhood, and I have taken the

harshest route to the Temple thrice", said Dr Radhakrishnan humbly.

"I love reading spiritual books and I am deeply influenced by the Bhagwad Gita, which I read regularly. I believe in the power of God," he added.

Many people may not know that this rocket scientist is also a trained 'kathakali' artiste. He loves carnatic music and practises vocal music every day early morning, even in the midst of his tight schedule. He begins and ends his day listening to Carnatic music.

Remembering the Gurus

Before signing off the telephonic conversation, Dr Radhakrishnan recollected his days with Dr Vikram Sarabhai, Dr Satish Dhawan and Dr U R Rao, the great architects of Indian Space Mission and remembered the inspiration he received from them. No doubt,

the scientist, the spiritualist and the artiste in Dr Radhakrishnan has influenced in making him a great leader too.

PreSense congratulates Dr Radhakrishnan and his ISRO team for making India proud.

By K Srinivasan, Editor in Chief, PreSense

Source: January 2014 issue of Ezine PreSense

“No deserving student should be deprived of higher education for want of funds” – Dr K C Chakrabarty, Deputy Governor of Reserve Bank of India

In a freewheeling telephone interview with K Srinivasan, Editor in Chief, Dr K C Chakrabarty, Deputy Governor of Reserve Bank of India vehemently declares, “No deserving student should be deprived of higher education for want of funds”. Here is an edited excerpt:



The 21st century is widely acclaimed as the knowledge century. What role will knowledge and education play in the development of India 2020?

India has transformed from an agrarian to an industrial economy. From here, it has moved to service and now it is moving towards becoming a knowledge economy, where education is key. 55% of our population is below 25 years of age and 33% is less than 15 years old. As such, in 2020, the average age of our population will be 29, compared to 37 in China, 45 in Western Europe and 48 in Japan. If this population is trained and educated as per international standards, they will be equipped with skills that meet global requirements and this will present a great opportunity for the country.

Statistics from the RBI website suggest that only 0.6% of the loan amount allocated to education is being utilised. Why is this?

Only 10% of the population in India has access to bank credit. However, this amount is going up in leaps and bounds. It has grown from 6,800 crores in 2005 to 28,000 crores last year – nearly four times in the last four years. The number of education loan accounts is growing at the rate of three lakh per annum. As and when our penetration improves and education gets more professional, awareness will increase and more students will come forward to avail this opportunity. Once students pay back

loans, they will become customers and such schemes will be encouraged.

It has been generally observed that bank managers are reluctant to encourage education loans and many poor but deserving students, especially from rural areas, do not find adequate support from the banking system in securing such loans. What steps are being taken to address this problem?

I agree that there may be reluctance on the part of bank managers in allotting education loans. Perhaps they are not convinced of the viability and antecedents of such loans due to past experiences of people who may not have paid. Bank managers need to be conservative in giving loans. Therefore, in order to popularise education loans, banks need to perceive this product as a business. We need to create the necessary confidence in bank managers. The government can implement an insurance scheme for students who are not able to meet loan requirements. This will help to create confidence. Any deserving student, who has been unable to secure an education loan, needs to bring this to our notice. They can also write to the chief executive of banks, to nodal officers appointed at the RBI and even to me.

Can you think of any aggressive campaign by the chairmen and CEOs of various banks for helping deserving students?

Instead of the chairman, local branch managers should be involved for effective education loan campaigns.

There have been complaints of banks charging a high rate of interest on education loans and demanding third party guarantee even for small loans of up to four lakh rupees. What is your opinion on such grievances?

The rate of interest differs from bank to bank. Public sector banks have already been advised to provide loans at reasonable rates. In my view, reasonable rates should be no more than 12% as of today and most public sector banks are lending around this rate.

It is important to understand that banks need to get money at this rate to recover the cost to the organisation.

We have created various institutions like IDBI, NABARD and National Housing Bank to assist sectors like industry, agriculture and housing. In a similar vein, with the growing priority of education, is it possible to think of an institution like Vidya Development Bank of India to focus on this sector?

We develop specialised institutions like IDBI for certain sectors because banks are not able to evaluate and formulate projects in these sectors. However, in education, no project needs to be prepared. Educational institutions make the projects and provide education and banks are only required to provide the finance – a normal business of the bank. Besides, the government already has institutions like the University Grants Commission and similar bodies that work towards developing education infrastructure and spreading education. As such, there is no need for a separate institution in this domain.

Any words for students who are considering taking a bank loan?

The 21st century can be India's century and students have a tremendous opportunity if education develops their skills; they acquire knowledge of a world standard and work hard. We at RBI have tried to ensure that no deserving student is deprived of higher education because of a lack of funding. Once students avail their loans, they should ensure their success and pay back the loan amount. This will motivate bank managers to extend loans to hundreds of other students. All the best!

***By K Srinivasan, Editor in Chief, PreSense.
Source: January 2010 issue of Ezine PreSense***

“Greed is the Outcome of Materialistic Society” – Dr Subramanian Swamy

Dr Subramanian Swamy, President of the Janata Party and a well-known Indian politician is known for his perseverance. Whatever the issue that he takes up, he pursues it to its logical end. Though many media houses have been talking about the current 2G scam, it was only through the sustained approach of Dr Swamy through the judicial route that the culprits were arrested. In an exclusive interview with K. Srinivasan, for PreSense and PodUniversal, Dr Swamy shared his insights about the qualities of



perseverance. Excerpts:

You are known for your perseverance. Whatever issue you take up, you take it to its logical end. In your opinion, how can our youngsters imbibe the qualities of perseverance?

If you are brought up in the Hindu tradition, you learn that you have only the freedom of action. Output of your efforts is not directly proportional to the efforts. Sometimes, you put in lot of effort and get nothing; sometimes, with least efforts, you get a lot. The same is described in the Bhagawad Gita as the Law of Karma. Everyone should pursue the goal, putting its best efforts without the anxiety and stress about the outcome. If you understand and develop this attitude, 'perseverance' comes. If you get disheartened, perseverance evaporates. Generally, people are averse to taking risks. You cannot achieve anything without taking risks. When you take the risk, there is the possibility of failure too. Risk-taking attitude should be developed. Perseverance is the amalgam of multiple intelligences like emotional intelligence, social intelligence, moral intelligence and spiritual intelligence. India is known for spiritual intelligence,

which connects to cosmos. Perseverance comes when you realise that you are an instrument in the hands of the 'divine' and what you are doing is only the 'duty'.

Whenever we see you on the television, you look very cool, even during apparently tense moments. How do you manage this?

That is what is called 'suppression of ego'. Tension occurs when you think that you are responsible for the good or bad things that happen. Anybody, who thinks that he is only the instrument in this whole thing and that he is doing only his duty, will never be tensed.

The interview can be watched at

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

Source: February 2011 issue of Ezine PreSense

Astrology Can Never Go Wrong - Shiva

M S Shivakumar (40), who researches and practises astrology as his passion, is a Learning & Development professional. He has served at the top level in L&D department of Fortune 500 companies across the globe. Shiva, a highly qualified person and alumnus of many prestigious institutions including IIM, strongly believes that the principle of astrology is to "Make things Happen" rather than "Watch things happen or wonder what happened". In an exclusive interview with K. Srinivasan, Editor in Chief, Shiva shared some interesting aspects of astrology. Excerpts:

What is the history of Astrology? Who first developed this concept and when?

It is very difficult to say when the concept of astrology was developed in India. Vedas and Upanishads talk about the planetary movements and their impact on the human being. Many *Rishis* have contributed to this knowledge. Even the Epics like Ramayana and Mahabaratha have references about astrology. Astrology dates back to 6000 to 10000 years. Vedic Astrology is also known as *Jothisha*.

In ancient days, this knowledge was passed on to the disciples through *Guru Parampara*. It was not available to the common men, to prevent misuse of this concept. In those days, there were experts, who advised the kings while taking important decisions, based on astrology.

There are three major categories in Astrology. (1) *Siddhantha* (*Panchanga* based), (2) *Samhitha* (for kings and their kingdoms) and (3) *Hora* (time-based prediction of events).

“

There are three major categories in Astrology.

- (1) *Siddhantha* (*Panchanga* based),
- (2) *Samhitha* (for Kings and their Kingdom) and
- (3) *Hora* (time based prediction of events).

- M S Shivakumar



Parasara Maharishi conducted a detailed study from the Vedas, Upanishads, Puranas and scriptures, written thousands of years

ago. He filtered and consolidated the concept of astrology. Several schools of thought came up later. The *Parasara* school of thought is mainly followed. *Jaimini*, *Saravali*, *Jathaka Parijatha*, *Saravatha Chinthamani* were the main schools of thought that came up later.

What is the basic concept of astrology? How is astronomy used in astrology?

Anything that is related to the 'out of earth' atmosphere is known as astronomy. The Study of the connection between the Celestial (study of sky) and the Terrestrial (study of earth) is astrology. It is purely based on the metaphysical principle, using the mathematical relationship. Astrology involves a lot of mathematics. Mathematical relationship is needed to understand and express the quality of energy of planets (sound, shape, angles, numbers, etc.)

Planets and stars emit energy of different strengths at a variety of instances. These energy and its frequencies are the cause of the creation, sustenance and ending of events in one's life.

Astrology involves 27 stars, 9 planets and 12 *Bhavas* (houses). To predict an event that can occur in future, we may need to analyse 2916 data points for accuracy ($27 \times 9 \times 12$), which will let us know the influence and impact of planets and stars on an event.

If a person starts learning astrology at the age of 8, dedicating 8 hours per day for 800 years continuously, he will learn only one-sixteenth of astrology. It involves a lot of cosmic intelligence and calculation of planetary movement.

There are three levels of consciousness – simple consciousness (5th sense), self consciousness (6th sense) and third cosmic consciousness (7th sense). Each consciousness can speak to each other.

The planets in the universe communicate with each other through light, heat, rays, neutrinos, x-rays, etc. It has a huge impact on the human neural network. To understand cosmic consciousness, one needs cosmic intelligence.

If you see the astrologers, they normally prepare two charts (*Rasi* and *Navamsa*), based on the date of birth, time and place. They are called Divisional Charts D1 and D9. These charts indicate the planetary positions at the time of birth of a person. We can make 144 such charts to understand deeply. The charts can be prepared from D1 to D144.

How Astrology Works?

There are three outcomes – event, experience and environment. Events are like occurrence of job, wedding, position, health, wealth, etc. Experience is emotions and feelings, derived out of an event. Environment is the boundary of the limitation within which a person's life operates.

Potential and Manifestation are the two wheels of astrology. A person may have great knowledge about business or may be highly talented. The potential of the person can be so high that he can make things happen and can become rich. But in reality, if you check, he would not be able to produce success or achieve growth. That is called manifestation.

One planet determines the skill and another planet determines the results. One may have the potential, but if not manifested in reality, it is of no use. In order to make use of the best time and increase the success rate, the branches of astrology like *Kaala*, *Ganitha*, *Jaataka*, *Prasna*, *Murtha* and *Nimitta* help.

Vidhi, Madhi and Gadhi - *Vidhi* is fate, what is shown in the chart. *Madhi* can be utilised to escape *Vidhi*'s difficulties or challenges. *Gadhi* is known as Surrender to Almighty.

Bucke, a Canadian psychiatrist, says "cosmic consciousness is an interconnected way of seeing things, which is more of an intuitive knowing than it is a factual understanding. Astrology is not just a belief but knowledge about belief.

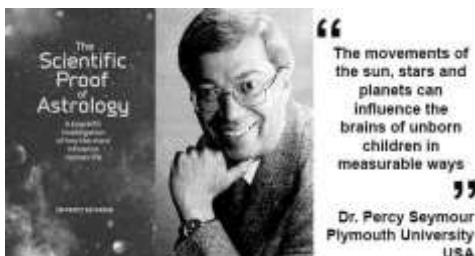
Action + confidence + faith = belief

It is like cautioning and helping a person to achieve maximum potential to manifestation.

Astrology can never go wrong. An astrologer can go wrong.

Is Astrology a Science or an Art?

According to me, astrology is pure science. Today, astrology is seen as the 'Law of Possibility' rather than the 'Law of Accuracy'. Dr. Percy Seymour conducted research on the Mechanism of Astrology in Plymouth University (USA). He concluded that planets move like tidal tugs; they interact with each other, and they have an impact on human lives. He also claimed in his book titled "The Scientific Proof of Astrology" that the movements of the sun, the stars and the planets can influence the brains of unborn children in measurable ways. Several researches on astrology have been initiated in various universities across the world. There are scientists who do not consider astrology as science. Everything need not be classified under science. I feel the opposite of science is not pseudo science, myth, spirituality or belief. I call it 'unexplored science'.



Science and spiritual belief co-existed for ages. Even today, we see many scientists who believe in spirituality, culture and values. People who are rational are also spiritual. It is not either science or culture, rational or spiritual. It is a combination of both.

By positioning ourselves on both sides, we may be able to understand the subject better. A single-sided perspective will only increase the blind spots. Proven science can only work within limited and restricted grounds. Studies are still being carried out in the unexplored areas of supernovae explosions, gamma ray bursts, and cosmic microwave background radiation. Although it consumes time, we need scholars to conduct more study to bring in evidence, logic and witness behind astrology and get the fullest benefit to mankind and take this subject to a larger audience for more fruitful findings.

How Western Astrology Differs from Indian Astrology?

Western astrology is sun sign-based. Indian astrology is moon-based. Vedic astrology is the oldest. All other schools of thoughts, whether Indian or Western, are derived from Vedic Astrology. Astrology is a wonderful science that provides guidance to maximise growth and success and minimise loss or distress. It helps you to be at right place at right time with the right people, with the right health and the right intention, guided by the right *Guru* or God Almighty. Make use of this science and be benefited! Shivakumar can be reached at msshiva@yahoo.com

Source: Jan 2016 issue of Ezine PreSense

An Evening With Some Earthly Stars

It was an evening to remember when the Editorial Team met up with some students from various Government Schools in the city of Chennai. These students were recently recognised and awarded for their achievements in their



(Left to Right) Noorul Hasbiya, D.Gopi, D.Yukesh Babu, K.Chandru, S.Premkumar, Ranjith, S.Sangeetha, Samuel (in front)

respective areas of proficiency. The awards function was organised by 'You Are Loved', a local

NGO (Non-Governmental Organisation) that supports education and allied causes. All these students hail from economically challenged domestic backgrounds but their spirit, achievements and dreams soar in spite of these challenges.

The children, who were students of Standard 10 and 12 classes, turned up smart and spruced in their school uniforms. They all had a sparkle in their eyes and a bounce in their gait, reflecting the confidence and enthusiasm they emanated. As we sat down to chat with them, each one of them shared their dreams and aspirations with us.

We generally tend to look for talents in high-end schools. We rarely expect to find talents and jewels in the lesser known Government or Corporation schools. The Editorial Team wanted to showcase the talents from unexpected quarters, and meet such talented children and motivate them. Interestingly, the Editorial team returned home after being motivated and inspired by these children instead.

Sangeetha is a true embodiment of girl empowerment. Even as a pavement dweller, her housemaid-mother as a single parent, and her elder sister motivate her in her studies. Sangeetha is an ace footballer and represented India (the sole representative from the state of Tamil Nadu) in an 8-member team at the Homeless World Cup at Glasgow, Scotland in July 2016. India won the 5th place among 46 countries that participated. Sangeetha shared her experience about how dreams were dreamt to make them

happen. She said she used to run out to the streets with her pavement friends at the sound of a passing aeroplane in flight, and wave out to it, hoping the passengers on board, would see her. Last July, when she arrived at the airport to board the aircraft on her way to Glasgow, she choked with emotion as she realised that she herself was boarding one of them to fly out. We were curious if she remembered to wave down from her window seat in the aeroplane. She smiled in response. Sangeetha is also a long-distance runner, a long-jumper and a shot-putter.



Sangeetha, third from left, with the Indian Team

Chandru won his award for his overall consistent academic performance. He aspires to be a pilot, with Dr. APJ Abdul Kalam, the late former President of India as his inspiration. Coming from a home with a single parent, Chandru helps support his family by delivering newspapers at doorsteps every morning before school. He is also skilled in masonry and works during holidays.

Ranjith Kumar, recognised for his discipline and outstanding academic performance, is a topper in his school. He aspires to be in the Indian Police Service (IPS), aiming to provide protection to women and senior citizens, who form the vulnerable section of the society today. Ranjith comes from a poor family where his father squanders as an alcoholic. His mother, his brother and his uncles are his support. His motivator is his school teacher who drives him to dream and work towards the dream. Ranjith is active in the sports field, and plays volleyball.

Premkumar aspires to be a scientist with the Indian Space Research Organisation (ISRO). He has keen interest in robotics and he won the prize for the second best project in robotics at a national level science exhibition held in the city of Bengaluru. After an outstanding performance in the Standard 10 examinations, he is striving to beat the record of the previous year's state top ranker, who is his namesake. Premkumar's role models are Subramania Bharati, the Indian writer, poet, Indian

independence activist and social reformer, and Dr APJ Abdul Kalam.

Noorul is a talented oratorical champion and essay writer. She has been a consistent topper in academics in her school. She hopes to repeat her performance in the forthcoming Standard 12 public examinations. Nurul aspires to become a District Collector as she dreams of promoting education among girls, just as it has brought her the empowering spirit to dream and achieve. She wants to be the 'Malala' of India.

Gopi is another school topper in the Standard 10 public examinations. He wants to study so that one day he will acquire a doctorate. He dreams of working in the Indian Administrative Service and dedicate himself in the field of education because he is well aware that education is a powerful tool in life. Gopi shared his life episode of how he returned to school after dropping out for about 6 months due to an attack of typhoid fever. The fever kept him in bed for three months when he was studying in Standard 7. Having been an outstanding student during his entire school years, he felt embarrassed to get back to school after the break and suffer a possible dip in his academic record. He therefore went to work as a vegetable vendor. In the evenings, while he worked on the accounts for the day, his neighbour flower vendor would observe him, impressed with his handwriting, his intelligence and his adeptness with mathematics. He cajoled Gopi to return to school. Gopi who was aware of the dire financial state in his family, approached his aunt for support. Gopi soon returned to school to join the class in standard 8. There was no looking back thereafter. Gopi is also a good orator and debater and has won several prizes.



Bharathi with her mother

Yugesh Babu has been a consistently outstanding academic performer. He has held himself high as a role model both in school and at home. This is especially worth mentioning as he comes from a drug and violence prone neighbourhood at home. Yogesh has soared above the challenges of financial crunch at home, a physically challenged father and a

violence prone neighbourhood. Yogesh dares to envision being successful in life while maintaining his integrity, and help his family out from the depressing environment. He is keen to learn computer technology.

Samuel is the youngest in the group, being a student of Standard 8. As the youngest recipient of the award, he stands out as a promising candidate for proficiency and academic achievement. He was recognised for his talent in the fine arts, especially oratory, singing and dancing. However, he aspires to be a scientist like his role model, Dr APJ Abdul Kalam. Alternatively, he hopes to be of service to the society as a doctor.

Bharathi is an academically outstanding student. She stood first in her school in the public examinations for Standard 10. She will soon be appearing in the public examinations for Standard 12. She was recognised for the award for her leadership skills. She too comes from a single-parent home, with her mother working as a sweeper in the school she studies in. Bharathi has outstanding oratorical skills that won her a place in the final competition of a state-level competition held earlier this year, organised by the Rotary Club with the Corporation of Chennai. She reached the finals from among 2000 student participants. She thus won herself an educational trip to Malaysia. Bharathi aspires to be in the Indian Administrative Service (IAS) with an ambition to help eradicate poverty.

The Editorial Team met these students in the premises of the Chennai Higher Secondary School in Shenoy Nagar. Chennai. Not surprisingly, all the children considered Dr Abdul Kalam a role model. When asked about the current 'Demonetisation' initiative of the Government of India, all the children uniformly welcomed the initiative and deplored black money holders as enemies of the society. However, they felt that they were inconvenienced for want of smaller denominations, which they were willing to put up with for the sake of the nation.

Jesse Jackson, an American Civil Rights Activist and a former candidate for the US Democratic Party presidential nomination, once said about himself, "I was born in a slum but the slum

wasn't born in me". A similar spirit embodies these children who hail from challenging homes and backgrounds, and have soared to prove themselves and stand out like the stars that sparkle in the sky. As the line from a popular song goes, "Let these stars not get lost on this earth."

Susan Koshy, Editor

Source: November 2016 issue of Ezine PreSense

Sivakasi – Pride of India – The Inspiring Story of Villagers Who Converted Challenges to Opportunities

When we fire crackers during Diwali and other festival days or when we use a match box to light a candle or a stove or when we receive New Year diaries and calendars, we seldom recognise that these products were made in a small South Indian town Sivakasi, nearly 200 kilometres from the southern tip of our country. Presently more than 95% of fireworks and crackers and 90% of safety match boxes used by India are produced and supplied by Sivakasi.

Looking Back

Nearly 90 years ago, the residents of this small village of 7 square kilometre area were entirely dependent on agriculture, without any rivers in the vicinity. When the monsoon failed, times were tough for them. A near zero literacy coupled with economic backwardness made their lives miserable, since they were not required anywhere.



Two great young visionaries from Sivakasi – Ayya Nadar and Shanmuga Nadar went to Calcutta and learnt the techniques of sulphur match. They started making the first sulphur match in 1923 at Sivakasi. The sulphur match would burn when struck against a rough surface. Then they started making the present form of 'safety match' in 1932. This is the humble beginning of the 'Journey of Sivakasi', which was described as 'Kutti Japan' (meaning Little Japan) by Pandit Jawaharlal Nehru in the later years. Sivakasi has now become the hub of the fireworks industry in the world, second only to Liuyang, the Chinese fireworks city.

When all the centres of India display 'No vacancy board', Sivakasi welcomes uneducated and unskilled labour and train them.

Sivakasi – a Brief Profile

Presently, 956 factories operate with approved licences, of which nearly 550 factories have the licence of the Central Government to handle more than 2000 kilograms of chemicals at a given time. It is estimated that nearly Rs.4000 crore (Rs.40 billion) of fireworks/crackers are marketed through these licensed factories every year.

Nearly 25% of the fireworks factories also produce 'matches'. Since the process is less risky, the licensing formalities are easier. Nearly 5000 units produce 95% of the safety matches required for India. They also export nearly Rs.400 crore (Rs.4 billion) worth of match boxes.



Interestingly, both fireworks and match industries do not require much water and electricity. They are all done manually. These industries enjoy the required climatic condition too.

In addition to handling chemicals, several jobs like paper tube making (for crackers), printing of labels, packing materials, etc. provide large-scale employment opportunity to the local people. In order to print their own labels, the industrialists purchased printing machines and developed the capacity to print diaries, calendars and text books. Twenty years ago, Sivakasi was catering to nearly 80% of the country's printing job, Nowadays, due to technological growth, Sivakasi contributes to only 15 to 20% of the nation's printing job. Today, nearly 1500 printing machines provide direct employment to 20,000 persons.

60% of the production of fireworks and crackers are used during the *Deepawali* season and the rest are used across the country during other occasions like *Holi*, weddings, political meetings, etc. throughout the year. 4480 permanent shops and more than one lakh (100,000) temporary shops (for Diwali season) across India

have been licensed to sell fireworks and crackers. Fireworks/crackers are manufactured throughout the year.

Considering the production, ancillary jobs, transport, retailing, etc., Sivakasi provides employment opportunity to 1 million people directly and indirectly in the neighbourhood and 10 million people across India.

Challenges

Though the Government has stipulated strict conditions for this hazardous industry, it is reported that many people due to their greed violate the norms in order to increase production. Many people produce fireworks and crackers in unlicensed premises, flouting safety methods. This leads to accidents. During the past 16 years since 2001, 350 deaths have been reported due to accidents, with an average of 20 deaths per annum. Considering the nature of this industry involving dangerous chemicals and engagement of nearly one million people, the death of 20 persons appears negligible, but it could have been totally avoided. However, a huge hype is made about the mishaps in this industry as if this is the only dangerous industry in the country.

Some Non-Government Organisations (NGOs) funded by some foreign countries create an impression among the people across the country that compel them to boycott fireworks and crackers due to deaths, child labour and environment pollution in this industry.

Our Editorial Team visited Sivakasi in the last week of March 2017 and interacted with various owners, labourers, Government officials and people. The Team also attended the awareness programme organised by the Government jointly with The Tamil Nadu Fireworks and Amorges Manufacturers' Association (TANFAMA), the apex body of licensed manufacturers. During this event, the District Collector confirmed that Sivakasi has 'zero' child labour.

Around 20 years ago when the industry was growing, children were used as labour in the industry. Everybody, including the

Government officials now confirm that there is no child labour in the district anymore. When we visited the factories, we too did not see any child labour. "Some forces are working against Sivakasi's growth. They silently indulge in destroying the native culture of this country and the festivals. They first created an impression in the world about child labour in Sivakasi. Even the international media like BBC visited Sivakasi and confirmed that there was no child labour", said Dr P Ganesan, Spokesperson of TANFAMA. Dr Ganesan himself is the owner of a leading brand 'Vinayaka Sony Fireworks' and has more than 900 sheds.

Although Chinese crackers are prohibited in India due to their usage of banned chemical potassium chlorate, they are still imported on a large scale by unscrupulous traders hiding them under imported toys with the connivance of some of the Government officials. These Chinese crackers flood the market during the *Diwali* season and are sold at very low price, even though they are banned. These crackers are not safe for use in hot countries like India. TANFAMA has been taking up this issue with successive Governments. During the past two years, these imports have reduced but they have still not been arrested completely.



Dr P Ganesan

Some of the NGOs have now started taking up the issue of noise pollution. The industry has regulated itself to produce crackers of sound volume less than 125dB. The sound level is managed by proper mixing of chemicals in a prescribed ratio.

After the *Diwali* festival of 2016, the Delhi High Court banned fire crackers in Delhi NCR alleging 'air pollution'. Later, a study by IIT Kanpur and images of NASA disclosed that the air pollution was not mainly due to the fire crackers, but it was due to mass burning of agricultural waste in the neighbouring region. This mass burning has affected Lahore too, a city which did not celebrate *Diwali*.

Quality Control

After much research, some of the leading manufacturers have introduced 'fancy



**NewYork Times report and
NASA image of smog recorded 5 days after Diwali**

fireworks' to provide a variety of safe experiences with fireworks for the consumers. A majority of the factories has its own R&D set up, laboratories, quality control mechanism, etc. They also test and verify the noise level of the finished products to ensure that they are well within the permitted level. Our team witnessed the testing of the quality at every stage right from raw materials to the finished product. This facility is available at major factories. The small licensed factories do not have this facility. Some of the major factories offer their testing service facilities to small licensed factories.

Some people produce fireworks and crackers illegally in unlicensed premises. They do not have the proper facility for checking the quality of raw materials and end products. The poor quality products are pushed into the market at low prices through second level traders. All the fatal



A view of the sheds and neem trees

accidents happen only because of these unlicensed productions. Due to corruption and political influences, they could not be controlled. The mistakes committed by these illegal producers tarnish the image of Sivakasi.

Social Responsibility

"In 1971, Sivakasi had only 60 licensed factories with 1500 sheds. Today, we have 956 licensed factories with 40,000 sheds. In spite of all challenges, people like to enjoy *Diwali* and other festivals with fireworks, which is the livelihood for more than one million people. At the time of Independence, we had almost zero literacy in our area. As part of our social responsibility, major brands of Sivakasi run 7 Engineering Colleges, 4 Arts & Science Colleges, 2 Polytechnics and 15 Higher Secondary Schools where more than 20,000 students get the opportunity to study at low cost. We provide fee concession and scholarships to the children of our employees. Many of the new generation boys and girls study abroad too. Though we may run the risk of shortage of labour in future, we want our town to be positioned in the global map", said Dr Ganesan proudly.

Generally, all the industries in India offer a one-month bonus to their employees once a year. Here at Sivakasi, all the factories give bonus amounting to five and half months' salary twice a year, to coincide with *Diwali* and other local temple festival.

To provide a cool and healthy climate, all the factories plant neem trees in their premises. "We have around 5000 neem trees in our own Sony Group factories. Even small factories have around 200 neem trees in their premises", Dr Ganesan added.

Towards Sivakasi V2.0 – Vision 2025

Since the industry involves the livelihood of one million people throughout the year, the Government has to ensure that all illegal and unlicensed producers, who cause harm to the reputation of the industry are dealt with severely. Dr Ganesan says that if GST is pegged at a minimum level of 12%, even the unlicensed producers have to be brought under the legal ambit.

Safety awareness programmes should be held regularly without waiting for accidents. Wherever possible, mechanisation can be introduced. With many technology institutions around, the new generation should strive to bring creativity and innovation with better safety measures.

The nation salutes the hardworking and vibrant people of Sivakasi, who were economically and educationally most backward in 1947 and have now converted their challenges into an opportunity to position themselves in the global map. PreSense is confident of seeing Sivakasi V2.0 by 2025.

***By K. Srinivasan, Editor in Chief, PreSense
Source: March 2017 issue of Ezine PreSense***

MS, The Immaculate Voice



Madurai Shanmugavadivu Subbulakshmi or M.S. Subbulakshmi, the *Swara Ganga* or 'Voice of Ganga', (Ganga being India's most sacred and lifeline river), was a world-renowned vocalist of Carnatic songs and *bhajans* (devotional songs). Born on September 16, 1916 in the town of adurai in the Southern state of Tamil Nadu, M.S. Subbulakshmi was fondly known by several names, the most popular being MS. As a child, back home in Madurai town, she was Kunjamma or Kunju to her family. Her unique voice and rendering of music won her several accolades as 'Queen of Music', 'Nightingale of India', 'The Eighth Tone of Music' and 'Goddess of the Perfect Note'.

MS was recognised both at the national and international arenas. In 1998, she was the first musician ever to be awarded the *Bharat Ratna*, India's highest civilian honour. India had also released a stamp as a tribute to her in 2005, a year after her death.

Earlier in 1974, she was the first Indian musician to receive the Ramon Magsaysay Award, which was considered Asia's Nobel Prize. The citation to the Award read, "Exacting purists acknowledge Srimati M.S. Subbulakshmi as the leading exponent of classical and semi-classical songs in the Carnatic tradition of South India'. In 2013, Google, the American multinational technology company that specialises in internet-related services and products, paid tribute to her by dedicating a colourful doodle on her 97th birthday. The doodle illustrates a lady singer holding a *Tambora*, accompanied by other Indian instruments as a *Ghatam*, a *Tabla* and a *Mridangam*.



Stamp issued by the United Nations to mark MS' birth centenary

However, MS' fame surpasses these awards. Her voice and musical prowess reached and touched listeners across religious, regional and

national borders. During the India Independence movement, MS participated in it by using her voice and her singing to make a statement and express her solidarity. Although MS



97th birthday - Google doodle

was born with a golden voice, she worked hard, both as a child from an impoverished background, and as a prodigy in music. She worked hard to cultivate her voice so that her God-given gift blossomed to its fullest. Incidentally, her vocal grooming was facilitated by her being born into a family of musicians. Hailing from the traditional community, her grandmother was a violinist and her mother, Shanmukhavadi Ammal was a veena player and a stage performer. MS underwent rigorous voice and music training from an early age under established gurus as Semmangudi Srinivasa Iyer for Carnatic music, and Pandit Narayanrao Vyas for Hindustani music. She was also able to hone her knowledge of Carnatic music through her regular interactions with exponents as Karaikudi Sambasiva Iyer, Mazhavarayanandal Subbarama Bhagavathar and Ariyakudi Ramanuja Iyengar.

With such rigorous and refining training, MS did her first performance on stage and recording at a tender age of 11 years. There was no looking back for her thereafter. She moved to Madras (now Chennai) and did a few films, both singing and acting in them. But after a short uneventful stint with the films, MS concentrated on her singing talent.

MS went on to become a legendary vocalist in the classical Carnatic music, popularising the traditional Indian classical music among the people across India, who were enthralled by her voice and rendering. Touching the musical interest of many across the world, MS was regarded the cultural ambassador of India, bringing the richness in the nuances of Carnatic music to the world, through her international concerts. She continued to perform till 1997), when she lost her husband, Kalki Sadasivam. MS was 81 years of age then.

M.S.Subbulakshmi died in Chennai on December 11, 2004 when she was 88 years of age, and was laid to rest with full State honours. The then President of India, Dr APJ Abdul Kalam visited Chennai to personally pay homage to her. In his condolence message, he said, "She was born in music and lived in music. In the end, she changed to become the music of God. The greatest good that she has done to the country is that through her music, she has made us all good human beings." Such was the reverence she enjoyed from the people, both Indians and foreigners alike, dignitaries and common citizens alike, music exponents and amateurs alike.

On her centenary birthday in 2016, the United Nations (UN) honoured MS posthumously with the release of a special stamp. This recognition by UN came as no surprise as she is fervently remembered for her stupendous vocal rendering of a song of peace and hope called the *Maitreem Bhajatha* at the UN General Assembly in 1966, on the invitation of the then Secretary General, U Thant. The lyrics were composed by Shri Kanchi Sankarachaya himself.

M.S.Subbulakshmi was a rare gem, a once-in-a-lifetime seen heavenly star that studded the world with her devout and perfect rendering of Sanskrit hymns. MS, in her humility, attributed it to the Divine, saying, "Indian music is oriented solely to the end of divine communion. If I have done something in this respect, it is entirely due to the grace of the Almighty who has chosen my humble self as a tool."

Snippets:

- M.S.Subbulakshmi was known for her Kanjeevaram sarees which she wore in the traditional Indian Brahmin style. A particular shade of blue called the '*mayil kazhuthu kalar*' became popularly known as 'MS blue'. It is reported that in commemoration of her birth centenary year, handloom silk saree cooperatives re-introduced the 'MS blue' sarees.
- The signature 'MS look' was her *blue jager* diamond nose studs, a necklace of emeralds, her hair put up in a bun and

adorned with fresh jasmine flowers, and red vermillion and ash marks on her forehead.

- MS, during her childhood, practised hard to train her voice. Her typical day would begin early at 6.00am, and after a South Indian breakfast of *idli* or *dosa* with filtered coffee, she would practise her singing, pitching her voice in tune with the *Tambora*, which is a long-necked Indian instrument used in recitals to provide a harmonic drone. Even after her practice session, she would wander around the house, singing, and hours later, she would still be in tune with the *Tambora*, she had pitched her voice in tune with.

By Susan Koshy, Editor
Source: Sep 2017 issue of Ezine PreSense

The Nobel Prize, The Most Coveted Prize on Earth, Awarded for "The Greatest Benefit to Mankind"

On 27th November 1895, a year before his death, Alfred Nobel signed the famous will which would implement some of the goals to which he had devoted much of his life. Nobel stipulated in his will that most of his estate of more than SEK (Swedish Krona) 31 million (today approximately SEK 1,702 million) should be converted into a fund and invested in "safe securities". The income from the investments was to be "distributed annually in the form of prizes to those who, during the preceding year, have conferred the greatest benefit to mankind." This prize is the Nobel Prize.

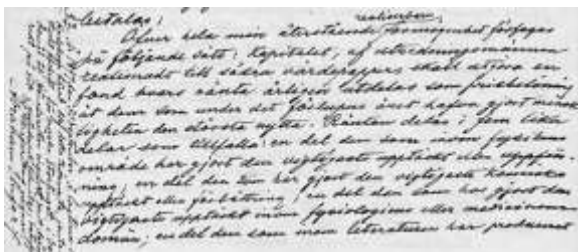
The Nobel Prize was first awarded in 1901 on the fifth death anniversary of Alfred Nobel. The award is since being given on an annual basis under a



Alfred Nobel (1833 - 1896)

number of categories, in recognition of advances in the fields of physics, chemistry, physiology or medicine, literature and peace. There are five Nobel Committees responsible for the selection of the awardees for the Nobel Prize, one for each Nobel Prize. Four of these Committees for physics, chemistry, physiology or medicine and literature are in Sweden, while the fifth Nobel Committee for the Nobel Peace Prize is in Norway.

Physics was the category for the prize, which Alfred Nobel



mentioned first in his will. At the end of the nineteenth century, many people considered physics as the foremost of the

Alfred Nobel's will

sciences, and perhaps Nobel saw it this way as well. His own research was also closely tied to physics.

At the Awards' ceremony, each recipient or laureate, receives a gold medal, a diploma and a sum of money, which is decided by the Nobel Foundation. As of now, each prize is worth US \$1.2 million. The Nobel Laureates take centre-stage in Stockholm on 10th December every year, when they receive the Nobel Medal, the Nobel Diploma and a document confirming the Nobel Prize amount, from King Carl XVI Gustaf of Sweden. In Oslo, the Nobel Peace Prize Laureates receive their Nobel Peace Prize from the Chairman of the Norwegian Nobel Committee in the presence of King Harald V of Norway. An important part of the ceremony is the presentation of lectures by the Nobel Laureates. In Stockholm, the lectures are presented days before the Nobel Prize Award Ceremony. In Oslo, the Nobel Laureates deliver their lectures during the Nobel Peace Prize Award Ceremony.

The Selection Process

Nomination forms are sent by the Nobel Committee to about 3,000 individuals, usually in the month of September of the year before the prizes are awarded. These individuals are generally all the living Nobel laureates and prominent academics working in the relevant area, globally. The deadline for the return of the nomination forms is 31st January of the year of the award. No person can nominate himself for the Nobel Prize.



Nobel Medal

The Nobel Committee nominates about 300 potential laureates from these forms and any additional names. The nominees are not publicly named, nor are they told that they are being considered for the prize. All the nomination records for a prize are sealed for 50 years from the year of the awarding of the

prize. The nominee, if his name is leaked, will be dropped from being considered for the prize.

The Nobel Committee then prepares a report reflecting the advice of experts in the relevant fields. This, along with the list of the preliminary candidates, is submitted to the prize-awarding institutions. The institutions meet to choose the laureate or laureates in each field by a majority vote. Their decision, which cannot be appealed, is announced immediately after the vote.

A maximum of three laureates and two different works may be selected per award. Except for the Peace Prize, which can be awarded to institutions, the awards can only be given to individuals. The Nobel prizes are not awarded posthumously.

The 2017 Nobel Prizes were awarded in recognition of the following:

Category	In Recognition of
Physics	For detecting gravitational waves
Chemistry	For developing cryo-microscopy
Physiology/Medicine	For discovering the mechanism of human circadian rhythm
Literature	For writing novels of great emotional force
Economics	For contributions in understanding behavioural economics
Peace	For drawing attention to the catastrophic consequences of use of nuclear weapons

So far 923 laureates have been awarded the Nobel Prize since 1901. Among them, only 12 are Indians, even though India has a population of 132 crore (1.32 billion), out of a global population of 760 crore (7.60 billion).

It is hoped that the new education policy of the Government of India will help in grooming potential Nobel Prize Laureates in the near future.

By Dr R. Jagannathan, Editorial Advisor

Source: November 2017 issue of Ezine PreSense

Divya – The Inspiring Story of Destiny and Perseverance

"When you want something, all the universe conspires to help you to achieve it". – Paulo Coelho, author



This story of this unsung hero is one that is close to the hearts of those associated with PreSense as well as the team in Action 2020, its partners in voluntary work. This is the story of young Divya Hemalatha Balakumaran.

Divya comes from a humble family background. She lost both her parents at a very tender age of 4 years. Her grandparents

took Divya under their care and nurtured her growth with their meagre pension. Divya excelled in studies winning a scholarship that took care of her studies.

However, her extended family was a constant source of irritation leading to frequent quarrels and disputes which impacted her emotionally. So, her grandparents moved to another village to avoid the challenges posed by the quarrelsome family.

Divya continued to excel in the new school and won scholarships to pursue her final two years in school, even though she lost her grandmother in the course of her schooling. She remembers with gratitude the support her young friends extended to get her hand-me-down text books and other aids for her schooling.

Divya went on to pursue the engineering course for graduation, after securing the top score in the district. Not able to afford the fees for the course, Divya had approached the banks for educational loan. The banks stipulated stiff conditions such as disbursing the loan as reimbursement and not as advance credit. It was during this challenging period that Action 2020 came to her rescue, adopting her as their ward. Incidentally, the Education Loan Task Force (ELTF – one of the initiatives of PreSense) was formed as a fallout of the ordeals experienced by Divya while seeking education loan from a bank. The efforts of well-wishers from Action2020 Team and Team Everest helped overcome the hurdles and secured the loan for Divya so that she could pursue her engineering course uninterrupted. ELTF nominated Lakshmi Radhakrishnan, an educationist as mentor and counsellor for Divya during her days as student.

During her college days, another tragedy struck Divya when she lost her grandfather who was her only family supporter. Action 2020 team continued to stand by her as her foster family. Divya soon took up a part-time job even while studying, in order to meet her basic daily expenses for sustenance.

She completed her engineering course with a university rank and was employed by Tata Consultancy Services (TCS), an Information Technology Consulting Company. Combating several

life challenges on a relay basis left her emotionally fatigued by then, but with the support of her colleagues and friends, she overcame her emotional turmoil. Divya is now deputed by her company to work in Amsterdam, Netherlands in Europe. It is a matter of pride to mention that her team won an award for excellence from her company recently. Divya had earlier won several awards from TCS for excellence in her individual capacity.

Divya had nurtured a dream to explore the world and interact with different types of people. She is grateful that her current job gives her that opportunity. She is also grateful that her other dream of having a circle of family is accomplished in her circle of innumerable friends and people who care for her.

Today, she endeavours to do her bit to give back to the society. She says her life principle is simple and uncomplicated – to continue to evolve as a good person, live happily, and spread that happiness and love to others.

She has repaid the entire Education Loan availed from the Bank ahead of time and has become a role model for all Education Loan borrowers.

Her advice to the emerging generation of youngsters is:

"Accept your life as it is and do not regret over it. Forgive yourself and believe in yourself. You are very strong irrespective of what you are, where you are and in whatever circumstances you are in life. Do not let anything or anyone make you believe otherwise. The past is a bygone. Live in the present moment, for the present is more important as it is there before you to live it out, and these little moments will be the ones you will cherish later. Love everyone around you. Life is short, and people are valuable. Care for them."

By Susan Koshy, Editor-in-Chief
Source : March 2018 issue of PreSense

Earth's Precious Environment – Threats and Mitigation



(Since our June 2018 issue was dedicated to the Sansad Ratna Awards, this story is published in the July 2018 edition, in view of the importance of its theme – Editor)

Humans and all living beings instinctively want to live as long as possible and as comfortably as possible. For this, the nascent environment of Earth which creates and sustains life on this planet, must be maintained without degradation. The present day global warming, climatic changes, and trillions of tonnes of plastic wastes floating in the oceans are serious signals alerting mankind to change their life styles, and the Governments to regulate the environmental balance scientifically.

Environmental Threats

Climatic changes and the resultant extreme weather conditions are cited as the top concerns. Adverse climatic changes are increasing the frequency and intensity of natural calamities like droughts, wildfires, heat waves, rainstorms, tropical cyclones, and hurricanes, explains the Scientific American, a popular American science magazine. This can lead to disrupted food

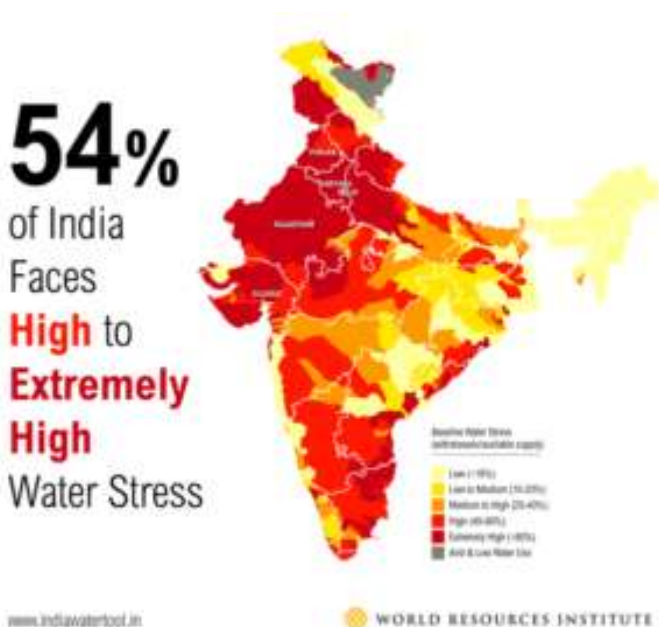
production, and famines. The carbon dioxide level in the atmosphere has increased from 280 parts per million to 400 parts per million in the last 150 years, due to excessive burning of fossil fuels, intensive agriculture, and other human activities. This has also resulted in an increase in the global temperature by one degree Celsius when compared to that at the pre-industrial level. This rise in temperature has also raised sea levels upto 4 feet since 2010, and caused Arctic ice caps to shrink, says NASA.

Tropospheric ozone depletion, caused by CFCs (chlorofluorocarbons) used in aerosol sprays, packing materials and refrigerants, etc, increases the levels of emission of greenhouse gases, traps heat and results in global warming. NASA has recorded that temperatures have risen by 1.7⁰F since 1880, with a corresponding decrease by 13% per decade in Arctic ice cover, and about a 7-inch increase in sea levels over the last 100 years.

Increase in pollution levels has caused loss in biodiversity due to extinction of species, and this is considered a threat not just for the environment but also for the global economy. An alarming rate of extinction of species is happening worldwide. The human induced rate of death of species is estimated to range from as slow a rate as 1,000 times, to as rapid a rate as 10,000 times the normal rate, reports the World Wildlife Fund (WWF). Greater preservation tactics and strategies are needed with laws put into place, to protect species. Intensive agriculture, unsustainable fishing, wildlife poaching, habitat degradation and destruction, acid rain, and climate change are threatening thousands of species.

Air, water, and land pollution has been named in the Global Risks Report 2018 as one of the prominent threats to environment. Ninety-two percent of the world population lives in areas with polluted air which causes 11.6% of global recorded deaths, points out World Health Organisation (WHO). The quality of atmospheric air is particularly bad in cities, and this situation is going to worsen as more people move to cities. Plastic pollution is so high that micro-plastic is found in 83% of tap-water in the world. Chemical pollution from agriculture and industries is

another problem where plants and animals are killed or affected by toxins.



Water crisis:

All the continents are affected by water shortage. We must remember that although 70% of Earth's surface is covered by water, only 2.5% is fresh water that people, plants and animals can use to survive. Water shortage does

occur due to physical lack of water, but in most cases, it is due to careless overuse.

Central Asia, the Arab world, parts of China, India, and the western parts of the United States suffer from water shortage. This can have devastating social and economic consequences. This can also lead to conflicts among people. In most places, the problem is more that of mismanagement, than a real lack of water. This therefore, is a problem that can be scientifically resolved.

Contamination of fresh water used for household needs, as well as pollution of rivers, lakes, and reservoirs, also rank high on the list of environmental concerns. There are scientifically set standards to ensure the quality of drinking water to protect public health, by limiting the levels of various contaminants like micro-

organisms, disinfectants and their by-products, and inorganic compounds. The respective governments must take steps to implement them in the right spirit.

A growing world population is an obvious threat to the environment. Consumption by an increasing population adversely affects the supply-demand balance of natural resources. It is observed that the annual requirement of renewable goods for humans, needs one and half years to produce!

Deforestation: Global Risks Report 2018 notes that in 2016, 29.7 million hectares of forests were cut down. The remaining forests which cover 30% of the land are not protected either. This leads to loss not just of biomass and plant species, but also of the habitats of animals. Deforestation is the driver of climate change as trees that normally absorb carbon dioxide and balance the optimum proportion of gases in the atmosphere, are no longer there. When a region loses its biodiversity, it becomes more vulnerable to other environmental elements. Deforestation also disrupts the natural balance of ecological systems in the area where the trees have been harvested. Food production can be impacted due to drought, and erosion is directly linked to the loss of forests.

Rain forests cover only 2% of land but support 50% of its species. Yet, in tropical forests, the area of rainforests cleared is the maximum, and most of it is export driven. Every year, an area of rainforest the size of Chennai city is cut down and destroyed.

Soil degradation is caused by soil erosion, soil compaction (moisture deprivation) and application of agricultural chemicals. Erosion of soil can happen due to wind or water, when the protective cover of forests and other vegetation is removed, and the topsoil is lost. Soil compaction occurs due to over-grazing, and heavy tillage, which is a characteristic part of industrial agriculture, explains Food and Agriculture Organisation (FAO). As a consequence, the soil loses its fertility and porosity, when the topsoil, rich in minerals that are necessary to nourish micro flora, plants, trees, and crops for their growth and survival, is lost.

Soils become compacted, affecting the hydrology of the area. American Scientist, an American science and technology magazine, points out that it takes 1000 years to form 3 centimetres of topsoil. And we are recklessly ruining it!

Land degradation affects 1.5 billion people around the world, according to the United Nations (UN). It is brought about by excessive farming, grazing, clearing of forests, and logging. Extreme degradation leads to desertification due to which 12 million hectares become unproductive annually.

Land misuse: Changes that result in replacing natural vegetation with urban sprawl and farms lead to habitat destruction, fragmentation, lack of free space for people and more carbon emissions.

Endangerment of species, animal and plant extinction, coral bleaching, introduction of invasive species and poaching all result in loss of natural animal habitats. The world is currently experiencing its sixth extinction event driven by human activities, reports the World Wildlife Fund (WWF). It is estimated to be 1000-10,000 times faster than natural extinction rates, and each year 200-2000 species go extinct in various parts of the world. Mother Nature Network (MNN, world's leading source of environmental news) reports that 38% of all land animals and 81% of fresh water vertebrates went extinct between 1970 to 2012, due to habitat loss and land degradation.

Fishing and its effect on marine ecosystems: Many forms of fishing like blast fishing, cyanide fishing, bottom trawling, whaling, and over-fishing have had an adverse effect on aquatic life.

Other pollution issues: Light pollution and noise pollution can affect the quality of life, health and behaviour. Light pollution upsets the natural biological clocks and also affects migratory birds, insects, and even aquatic life.

Ecosystem destruction: Shrinking habitats such as aquaculture, estuaries, shellfish protection, landscaping, and

wetlands are responsible for species loss, and can be protected through ecological restoration. Although global initiatives like the Convention on Biological Diversity (CBD), signed by nearly 200 countries are aimed at protecting the ecosystems, a scientific review in 2016 found that nearly half of the habitats is still severely threatened.

Toxins: Toxic chemicals are used in industry, agriculture, laboratories, hospitals, waste management systems and even residential homes, and include chlorofluorocarbons, heavy metals, pesticides, herbicides, toxic waste, PCB (polychlorinated biphenyl), DDT (Dichloro Diphenyl Trichloroethane), bio-accumulation, endocrine disruptors, asbestos. These can also arise from poorly implemented safety measures and hazardous waste management, affecting the quality of the atmosphere and the environment.

Turning Concern into Remedial Action

The present and urgent need is for the media, the public, the government and the scientific communities to focus the concerns that Earth is currently facing. Many of the concerns are interconnected, following the web of life. As increasing evidence shows the devastating effect humans have on the environment, more people must take steps to protect the environment and educate others. The State Governments must also proactively implement immediate measures to save Earth's environment, for example, impressing upon the use of renewable energy for home and business, effecting energy efficiency, and avoiding fossil fuel use, to mitigate climate change and protect the environment.

Carbon footprint: A carbon footprint is the amount of carbon emission each person creates out of any of his activity. Individuals can reduce this footprint and their effect on the environment, through use of renewable energy sources (solar power, geothermal heat pumps), recycling, and sustainable living.

	<u>Annual CO₂ Footprint</u>
1. A car giving 15 km/lit, covering a distance of 20 km daily:	4.3 tonnes
2. Consuming 30 grams of meat every day	0.8 tonnes
3. Resources needed for a new pair of pants + a new shirt	1.0 tonne
4. Resources needed to make one dining table with 6 chairs	2.0 tonnes
5. Flight from Chennai to Delhi	2.2 tonnes
6. Every one load of clothes in a dryer	0.1 tonne

Environmental protection and preservation of the planet is the responsibility of every individual and community on Earth. Identify a concern of interest from the above list to take action on a personal and household level, society level and Governmental level, to have an impact on the planet and to educate every member in the community on environmental issues. Every one of us have a duty to leave a liveable Earth, to our next generation.

By Dr R Jagannathan, Editorial Advisor
Source: July 2018 issue of PreSense

Ode to Mother Nature, Who Broke Down in Tears

"Man is the most insane species. He worships an invisible God and slaughters a visible Nature without realising that this Nature he slaughters is the invisible God he worships".

– Hubert Reeves

Mother Nature broke down recently. And when she did, she kept weeping till her tears ran dry, out of fatigue rather than consolation. This is the image that comes to the mind, as the southern coastal state of Kerala, recently experienced torrential rains that filled the dams to near-bursting seams, causing major landslides, collapse of residential mansions and shelters, caving-in of roads, tumbling down of bridges, cracks in constructions, and gushing floods that took with them lives and livestock. People were trapped in flooded houses, possessions were ruined in the muddy waters, and nights were pitch dark without power, food and water. This catastrophe seems to be a forewarning of what is waiting to happen, anywhere and everywhere in the world. It was a sad state as people from all over, reached out to help the hapless victims of Nature's fury. Was it her fury, or was it her grief? Was it not the fallout of the treatment we meted out to her over the years and decades gone by?

Mother Nature speaks:

"I came into being, beautiful and generous, bountiful and precious, Created by God to co-exist with man, and be respected as Mother, by his clan. I gave freely, I gave with love. I gave all I had, ever ready to share. Man took freely, as a child would from Mother. But he seemed to forget to care.

He began to exploit, to ill-treat. He took more, creating in me sore dents. There was nothing to stop him, as he realised his power over my elements.

*The elements of the mountains, forests and trees,
Creatures and animals, land, oceans and seas.*

*As he grew in population and in greed, he reduced me in my numbers,
He continued to ignore my quiet tears as he stripped my forests for timbers.
He molested me for stone and coal, not knowing when to stop.
He ignored signs of my breakdown. I could barely hold my teardrop.*

*Today, I am almost naked, barren, deprived, shamed, with punctures.
The beauty I once adorned, is today replaced by ugly structures.
Life is disappearing in the seas, the forests, the sky; there is barely any,
As man choked the creatures with plastics and chemicals or killed for money.*

*The pain of this continuous rape tears my heart. I am breaking down,
My tears cannot be stopped, even if they make you drown.
What you have done cannot be undone. But please do it no further.
Stop this treachery to me, I plead, before your actions turn to my murder.*

*For then I will curl, to give up my life in slow death mode.
That's when you too, Man! Your life with the whole earth will also explode.*

So, stop while you can, if you can, cease your crime! In repentance mourn!

Save me your Mother Nature, for only then will you be able to save your own!"

***By Susan Koshy, Editor-in-Chief
Source : August 2018 issue of PreSense***

Plastic Pollution – A Threat to Life on This Planet



Plastic pollution is the excessive accumulation of plastic products in the environment, adversely affecting wildlife, wildlife habitat and humans. Since plastics are inexpensive and durable, its production by humans is high. The chemical structure of most plastics renders them resistant to many natural processes of degradation, and as a result they are slow to degrade. These two factors together have led to a high accumulation of non-biodegradable plastic in the environment.

The annual global food production is around 3 billion tonnes, out of which about 1 billion tonnes is wasted and the rest is either consumed or bio-degraded in a few years' time. But as far as plastics are concerned, the world produces about 400 million tonnes of plastics every year. Between 1950 and 2018, an estimated 4.5 billion tonnes of plastic waste have been dumped on land and water bodies, including oceans. During the same period of 68 years, the world has burnt around 500 million tonnes of plastic, which produced toxic by-products, including many carcinogenic gases and other compounds, making this Earth a

polluted and hazardous place. Plastics therefore endanger land, air and water and pose a serious threat to life itself.

Some researchers suggest that by 2050 there could be more plastic by weight than fish, in the oceans. Plastics can harm living organisms, particularly marine animals, either by mechanical effects such as entanglement in plastic objects, or problems related to ingestion of plastic waste, or through exposure to chemicals in plastics that interfere with their physiology. Humans are also affected by plastic pollution, through disruption of various hormonal mechanisms.

Plastic pollution has the potential to poison animals, which can then adversely affect human food supplies. The book, '*Introduction to Marine Biology*' by Richard Turner et al, describes plastic pollution as being highly detrimental to large marine mammals, posing as the "single greatest threat" to them. Some marine species, such as sea turtles, were found to contain large quantities of plastic in their stomachs. When this occurs, the animal typically starves, because the plastic blocks the animal's digestive tract. Marine mammals sometimes become entangled in plastic products such as nets, which can harm or kill them.

Types of Plastic Debris

There are three major forms of plastic that contribute to plastic pollution: microplastics, mega-plastics and macro-plastics. Mega and micro plastics have accumulated in highest densities in the Northern Hemisphere, and are concentrated around urban centres and water fronts. They can be found off the coast of some islands because of currents carrying the debris. Both mega-plastics and macro-plastics are used in packaging, footwear, and other domestic items that have been washed off ships or discarded in landfills. Fishing-related items are more likely to be found around remote islands. These may also be referred to as micro-, meso-, and macro debris.

Micro-debris

Micro-debris is plastic between 2 mm and 5 mm (millimetre) in size. Plastic debris that starts off as meso- or macro-debris can become micro-debris through degradation and collisions that break it down into smaller pieces. Micro-debris is more commonly referred to as nurdles. Nurdles are recycled to make new plastic items, but they easily end up released into the environment during production because of their small size. They often end up in ocean waters through rivers and streams. Micro-debris that come from cleaning and cosmetic products are also referred to as scrubbers. Because micro-debris and scrubbers are so small in size, filter-feeding organisms often consume them.

Macro-debris

Plastic debris is categorised as macro-debris when it is larger than 20 mm. These include items such as plastic grocery bags. Macro-debris is often found in ocean waters, and can have a serious impact on native organisms. Fishing nets have been the prime pollutants. Even after they have been abandoned, they continue to trap marine organisms and other plastic debris. Eventually, these abandoned nets become too difficult to remove from the water because they become too heavy, having increased in weight upto 6 tonnes.

Decomposition of Plastic

Many kinds of plastics exist, depending on their precursors and the method for their polymerisation (a chemical reaction). Depending on their chemical composition, plastics and resins have varying properties related to contaminant absorption and adsorption. Polymer degradation takes much longer as a result of saline environments and the cooling effect of the sea. It is estimated that a foam plastic cup will take 50 years, a plastic beverage holder will take 400 years, a disposable nappy will take 450 years, and a fishing line will take 600 years to degrade.

Land

Chlorinated plastic can release harmful chemicals into the surrounding soil, and then seep into groundwater or other

surrounding water sources and also the ecosystem. This can cause serious harm to the species that drink the water. Landfill areas contain many different types of plastics. In these landfills, there are many micro-organisms which speed up the biodegradation of plastics. These micro-organisms include such bacteria as pseudomonas, nylon-eating bacteria, and flavobacteria. The breakdown of biodegradable plastics releases methane, a very powerful greenhouse gas that contributes significantly to global warming.

Oceans

In 2012, it was estimated that there were approximately 165 million tonnes of plastic pollution in the world's oceans. One type of plastic that is of concern in terms of ocean plastic pollution is nurdles. Nurdles are manufactured plastic pellets (a type of microplastic) used in the creation of plastic products and are often shipped as cargo. Many billions of nurdles are spilled into the oceans each year, and it has been estimated that globally, around 10% of beach litter consists of nurdles.

The toxins that are components of plastic include di-ethylhexyl phthalate, which is a toxic carcinogen, as well as lead, cadmium, and mercury. Plankton, fish, and ultimately the human race, through the food chain, ingest these highly toxic carcinogens and chemicals. Consuming the fish that contain these toxins can cause cancer, immune disorders, and birth defects.

Tap Water

A 2017 study found that 83% of tap water samples taken around the world contained plastic pollutants. This means that people may be ingesting between 3,000 and 4,000 microparticles of plastic from tap water per year.

Biodegradable and Degradable Plastics

The use of bio-degradable plastics has many advantages and disadvantages. Biodegradables are biopolymers that degrade in industrial composters. Biodegradables do not degrade as

efficiently in domestic composters, and during this slower process, methane gas may be emitted.

There are also other types of degradable materials that are not considered to be biopolymers, because they are oil-based, similar to other conventional plastics. These plastics are made more degradable through the use of different additives, which help them degrade when exposed to UV rays or other physical stressors. Although biodegradable and degradable plastics have helped reduce plastic pollution, there are some drawbacks. One issue concerning both types of plastics is that they do not break down very efficiently in the natural environment. Therefore, degradable plastics that are oil-based may break down into smaller fractions, after which point, they do not degrade further.

Creating Awareness

Every year, June 5th is observed as World Environment Day to raise awareness and increase government action on the pressing issue. This year, India is the host to the World Environment Day and the theme is 'Beat Plastic Pollution' with focus on single-use or disposable plastics. The Minister of Environment, Forest and Climate Change of India, invited people to take care of their Green Social Responsibility and urged them to take up Green Good Deeds in everyday life.

The billions of items of plastic wastes choking our oceans, lakes, and rivers, and piling up on land is a real and growing threat to human health. They are absolute threats to plants and wildlife too. Plastic pollution can make human beings an endangered species in our own planet.

by Dr R. Jagannathan, Editorial Advisor
Source : August 2018 issue of PreSense

Floyd Schmoe, The Good Samaritan for War-Stricken Hiroshima



August
6th and
9th mark
the days
of
mournful
and
solemn
remembrance
for
the world
and
especially
the
Japanese
people
who lost
millions
of their
kin to the
impact
and
effects of
the
atomic
bombing
in the

cities of Hiroshima and Nagasaki during the Second World War (WWII) in 1945. The two cities were devastated and reduced to ruins and ash. The people had to rebuild their lives from scratch.

Floyd Schmoe, an American by birth and residence, is a name revered and respected by the Japanese. This is because of the active role he played in their lives post-WWII. Coming from a

family with strong moral and religious values, Schmoe professed non-violence, and was a naturalist and a humanitarian. Right from a young age, he passionately loved and cared for Mother Nature, and took care of war-stricken and calamity-affected people.

When Schmoe came to know of the devastation of the two cities in Japan after the atomic bombings, he was shocked. He felt "it was an atrocity, even in warfare", and that merely apologising was not good enough. He said, "If I went to Japan and said, 'I'm sorry', they would have kicked me out. But if I went with my own money, and with my own hands built a house for a survivor, they would understand".

Thus, Schmoe visited Hiroshima when he got the opportunity in 1948. Viewing the damages, he set up a volunteer home-building work camp, naming the project "Houses for Hiroshima". Returning home to USA, he raised funds from his friends, and the following year, he set sail for Japan, equipped with building material for the homes to be built, and food and medical supplies for the Hiroshima hospital, and with three other volunteer Americans. In Hiroshima, he, along with many other Japanese volunteers, went on to build homes for the homeless in the ruined city. Schmoe's "Houses for Hiroshima" project helped build 20 houses in Hiroshima and 12 houses in Nagasaki. These houses were multi-units and community houses, sheltering nearly 100 families.

In 1983, the city of Hiroshima recognised Floyd Schmoe as an honorary citizen of Hiroshima. He had also received Japan's highest civilian honour.

This spectacular contribution by Schmoe to Hiroshima is not a one-off gesture to humanity. His entire life was dedicated to preserving nature, and helping humanity, especially those afflicted by war and calamity. Floyd Schmoe died at a ripe age of 105 years in his home in America.

by Susan Koshy, Editor in Chief
Source : August 2018 issue of PreSense

Bank Consolidation: Is Big Beautiful?

Small is beautiful, so goes a saying in English. But in banking, it seems small is not only not beautiful but is also not viable. 'The bigger, the more beautiful and more manageable' seems to be the buzzword in present day banking. Yes, we are talking about the recent Government announcement on bank mergers.

The consolidation of public sector banks (PSBs) to just around five or six big banks, has been on the cards for almost three decades now. It is a favourite topic of condemnation for bank employees and their unions, and opposition to it has always appeared in their list of demands over the years. The proposal for bank consolidation was first mooted by a former Governor of Reserve Bank of India (RBI), M. Narasimham, (much after he retired as RBI Governor in 1977), reportedly in a seminar paper in 1991, when he recommended a three-tier banking structure for India with i) three major banks with large international presence, ii) around 10 national banks and iii) a large number of regional and local banks.

Perhaps as the first step in the implementation of the larger mission, the Government of India announced that three public sector banks, viz. Bank of Baroda, Dena Bank and Vijaya Bank will be merged. At the present stage, when Indian banking system, especially with its huge public sector banking, is credited to be quite strong, considering that it was not adversely impacted by the global economic crisis of 2008, it is vehemently being debated whether such a drastic step is necessary and whether bigger banks are better. The Indian market itself has seen several smaller private banks of higher repute and valuation (in the stock market, in terms of managerial efficiency, in the scale of performing assets, and loan assessment methodologies) performing better than their larger peers.

Although the objective has been towards building larger scales, ie. of globally large scale, and strengthening the risk-taking ability, the trigger for the merger now, is the pile of bad assets under which some of the state-owned banks are likely to be buried. It is not known whether this first step (the "Big Bank Theory", as one newspaper put it) will ultimately end with just five or six big banks or not, triggering a dilemma in the common man or '*aam janata*', not knowing how to react to this largely economic initiative, vehement opposition by bank employees, and apprehension by analysts as a solution for reducing the bad loans.

Bank of Baroda, whose deposits are more than twice as large as the other two merging banks combined, can now stake a claim to being the country's third largest bank. Whether this size will yield the desired result (whatever it is!) and whether this is a good strategy, is a moot point. The combined entity will have Non-Performing Assets (NPAs) of about 13%, worse than Bank of Baroda's 12.4%.

The prime strength of PSBs lies in their large branch network, especially outside metropolitan areas. According to officially reported statistics, about 62% of India's savings' deposits are in the smaller cities, towns and villages, and 78% of household deposits of the nation are with PSBs. If the combined new bank (by whatever name it will be called) is to ensure growth, it should do it through securitisation ie. in a process transforming bad loans into good ones by realising from their illiquid securities, making them 'liquid'. Most of the smaller banks, regional and local banks by virtue of their professional relationship with their borrowers, have acquired expertise in loan assessment and asset recovery. Hence, it is criticised that the merger of banks might not yield the results anticipated in this area. Even in the case of recovery of large NPAs ie. the bad loans of huge corporate houses, it is not certain if 'the bigger the bank, the better' policy could be successful. Recent experience has shown that the merger of the associate banks with State Bank of India (SBI) has not proved beneficial.

Following the merger, gross NPAs of SBI have jumped from 7.23% of its advances, to 9.04%. The merged entity reported a loss of Rs.3,300 crore (Rs 33 billion) last March, as against profits reported earlier by SBI. But this is a short-term assessment.

Banking in India has already seen many mergers, like Bank of Madura with ICICI Bank, Bank of Thanjavur with Indian Bank, Bank of Tamil Nadu and later Bharat Overseas Bank with Indian Overseas Bank and even the public sector New Bank of India with another bigger PSB, Punjab National Bank. In all these cases too, there was criticism and opposition initially. But all the banks were able to stabilise comfortably later on.



Therefore, this move of merger is perhaps stated to be not so much for better efficiency but one for survival of the weaker banks, and to deal with their huge NPA problem. This merger has created a risk for the government as loss-making smaller banks merge to form a large loss-making entity. Quite interestingly, one analyst called the merger move as 'putting lipstick on a pig'!

Looking at the issue, purely from a public perspective, the financial stability of PSBs is not threatened as depositors do not run the risk of losing their money (as long as these Banks remain PSBs with the majority shareholding with the Government of India). The justification for the merger can be for managerial efficiency and cost cutting. Soon after this official announcement of Bank of Baroda, Vijaya Bank and Dena Bank getting merged, there have been reports that Punjab National Bank, Andhra Bank and Oriental Bank of Commerce are next in the list of mergers.

Antagonists argue that the need of the hour is financial inclusion, especially in view of the government's initiatives of direct credit of various incentives, subsidies and grants to the public, and less-cash economy, and not just mergers. However, mergers will certainly bring about cost-cutting, reduction of fixed expenditure

from closure of branches (ie. where branches of the merged banks are located in the same commercial complexes or in very close proximity with one another, as continuance of banks in the same name in such close proximity will not be desirable). It is hoped that the merger will yield benefits in the long run, since these were PSBs and will continue to be.

by V.Rajendran, Editor
Source: Sep 2018 issue of PreSense

***Our Soldiers, Our Guardians A Tribute on Armed Forces Flag Day
(December 7th)***



"Either I will come back after hoisting the tricolour, or I will come back wrapped in it. But I will come back for sure" – Capt Vikram Batra PVC (Param Veer Chakra)

India is a large expanse of land spread across an area of 3,287,263 square kilometres (km). Our country runs across 3,214 km from north to south and 2,933 km from east to west. India's land borders run along a total length of 15,200 km and its coastline is 7,517 km long. India's borders with some of its neighbouring countries are especially sensitive, and uncompromising vigilance along the borders is necessary. In spite of such vigilance, there are sporadic attacks from across the borders. The physical features and the climatic conditions along the land borders are also challenging. It is our Indian Armed Forces who protect the borders and the country against enemies

both from across the border, and from the terrorists' front. They guard our borders, our land, our seas and our airspace so that the rest of us in our homes, with our families and amongst our friends, can live our lives and enjoy our liberty without batting an eyelid about our safety and our security.

Composition of the Indian Armed Forces

The Indian Armed Forces with the President of India as its Supreme Commander, consist of the three services, viz. the Indian Army, the Indian Navy and the Indian Air Force. These services are complemented by three paramilitary forces, viz. Assam Rifles (AR), Indian Coast Guard (ICG) and Special Front Force (SFF). The Armed Forces and the Paramilitary Forces come under the Union Ministry of Defence.

The Central Armed Police Forces (CAPF), which comes under the command of the Union Ministry of Home Affairs, also function along the border to check illegal border crossings, encroachments and smuggling, on internal security duties and installation security. CAPF consists of the Border Security Force (BSF), Shashastra Seema Bal (SSB), Indo-Tibetan Border Force (ITBP), Central Reserve Police Force (CRPF) and Central Industrial Security Force (CISF).

Our country's international land borders are guarded by our Paramilitary Forces and CAPF – Indo-Pakistan Border and Indo-Bangladesh Border by BSF, Indo-China Border by ITBP, Indo-Nepal Border and Indo-Bhutan Border by SSB and the Myanmar Border by AR.

A natural question that arises is why the country's borders are guarded by Paramilitary and Armed Police Forces and not the Military Forces. According to international laws of war, there is a distinction between the armed forces of a country and its civilians. Only recognised military forces can fight a war, and military forces can be engaged only after the declaration of war. Paramilitary forces are technically not military forces even though they are often trained in that line. Guarding the borders is deemed a civilian job as it is primarily intended to protect the economic, commercial and security interests of the country. If a

country replaces these civilian forces with military, it is interpreted as an offensive move and considered a precursor to war. It is for this reason that undisputed borders are usually guarded by paramilitary forces. Disputed borders however, are guarded by the military. Therefore, we find that the disputed border with Pakistan in Kashmir is guarded by the Indian Army, while the other undisputed borders including that with Pakistan in Rajasthan and Punjab are not guarded by the Army. Even then, the Armed Forces are ever ready, alert and in station at its various commands and stations in the country.

Challenges Faced at the Borders

When the Indian Armed Forces combat against the enemy, they also have to deal with severely inclement weather conditions. The Siachen Glacier is located in the eastern Karakoram range in the Himalayas at a height of 5753 metres. Its average winter snowfall exceeds 1000 centimetres and the temperatures dip as low as minus 50°C. Even though the soldiers are trained to acclimatise themselves to the conditions before their deployment, the extremities are harsh and challenging as they guard and control the region in order to obtain a strategic advantage over the enemy territory.

Similarly, the town of Dras in the Kargil District of Jammu and



Kashmir experiences a sub-arctic climate and is known as the second coldest inhabited place in the world. The Indian Armed Forces maintain their continuous presence and vigil there, reinforced after the attempted Kargil invasion in 1999, which the Indian Army foiled.

In stark contrast, the area at the border in Rajasthan experiences very high temperatures of upto 50°C with dust storms, sand storms and blistering heat waves, almost unfit for living.

Near the Eastern borders, the Armed Forces face poor connectivity, heavy rainfall and difficult terrain during their patrol. The Indian Air Force plays a prominent role in transportation and supplies under these challenging circumstances.

While the Indian Navy guards the Indian coastal line and waters, and the Indian Air Force monitors the air space throughout the country, a special mention must be made about the 360° vigil over the Andamans and Nicobar group of islands in the eastern seas of the country. The two forces keep a constant guard over this region because of the international trade routes passing through these islands, and the growing presence of some foreign naval forces in the neighbouring seas. The Indian Army personnel is also posted on these islands.

In case of a domestic disaster, we find our Armed Forces in action in order to implement an effective disaster management of the crisis. This is because the civil administration is usually not properly equipped and prepared to deal with the disaster with an effective response and action. Discipline, efficiency and precision is primary in a response to a disaster situation and relief work. The military forces automatically fit to these demands and hence are called in, to deal with the crisis, and they do so successfully every time, as they are trained and prepared for 'Military Operations Other Than War' (MOOTW) as a critical part of their training.

The Pride of India

Our Indian Armed Forces have given the countrymen so many reasons to be proud of them that to enumerate them would mean a long list. Besides the outstanding valour with which they have guarded and won wars at the borders, they achieve the following feats:

- They control the highest battlefield in the world in the Siachen Glacier.
- The Indian soldiers are considered among the very best in high altitude and mountain warfare.
- The Indian Army built one of the highest bridges in the world – the Bailey Bridge in the Ladakh Valley in the state of Jammu and Kashmir. It was built in 1982 at a height of 5602 metres above mean sea level.
- Operation Rahat (2013), which the Indian Air Force undertook to rescue the flood-affected people in the state of Uttarakhand, using helicopters to airlift them, is deemed the biggest civilian rescue operation ever carried out so far, in the world.
- India is the second largest troop contributor (TCC) to the United Nations Peacekeeping Missions, with 7,676 personnel deployed in 10 out of 16 active UN Peacekeeping Missions. Till date, India has contributed nearly 195,000 troops, the largest number from any country, and participated in more than 49 missions, while 168 Indian peacekeepers have made the supreme sacrifice while serving in UN missions. The high standards of performance maintained consistently by the Indian troops deployed on UN Missions under challenging circumstances have won them high regard worldwide.

Joining the Indian Armed Forces

The Indian Defence Services offer lucrative career opportunities that are dignified and prestigious, to the youth of our country. One can serve in any of the three services of the Army, Navy and Air Force on combat duty (at the battle front), on administrative assignments, in the medical and engineering services, in the judicial services or in the education corps. Every Indian citizen can volunteer for recruitment in the Indian Armed Forces and will be eligible provided he/she meets the prescribed physical, medical and educational criteria. Serving in the Armed Forces gives the opportunity for adventure, benefits and facilities, travelling, acquiring skills, respect and recognition in the society, and service to country and countrymen.

Flag Day of India



On the 7th of December every year since 1949, the Armed Forces Flag Day or Flag Day of India is observed and dedicated in honour of our men in uniform, including the martyrs among

them, who fight and have fought for the country's safeguard and honour.

The objective of celebrating this day is to collect funds for rehabilitation of the battle casualties, welfare of the families of martyrs, welfare of serving personnel and their families, and resettlement and welfare of ex-servicemen and their families. The Flag Day is significant because it is the responsibility of the civilian population of India to take care of the families, dependents and personnel of the Armed Forces who have served the country and protected its citizens.

The patriotism that our Indian soldier bears in his heart and fights with his valour is aptly delivered in the sentiments of Capt R.Subramanian, recipient of the Kirti Chakra posthumously:

*"You have never lived until
You have almost died,
And for those who choose to fight,
Life has a special flavour,
The protected will never know!"*

We salute our Indian soldier. *Jai Jawan!*

***by Susan Koshy, Editor-in-Chief
Source : Dec 2018 issue of PreSense***

The Pulse of an Indian Soldier – In Service of the Nation

In the backdrop of the commemorative Cover Story about the Indian Armed Forces, it is befitting to feature a well-served soldier – Maj Gen Binoy Poonnen, AVSM, VSM, Mahar Regiment (Infantry) (Retired) – as a supplement. A gist of an interesting interactive session with him is reproduced:

Q. You come from a family and generations of servicemen in the Indian Armed Forces. How many of you in the family were or are serving in the Defences?

A. We are twenty-one of us, running through three generations, who have served or are serving in the Armed Forces. The first generation had my father, his brother, my mother's brother and three of her cousins in the defence forces. The second generation includes me, and four of my cousins, my wife's brother, her brother-in-law and her cousin, and the third generation consists of my two sons, my wife's four nephews and one niece. Quite a line-up that we are all proud of.

Q. What was your motivation for joining the Armed Forces? What motivated your sons?

A. The Armed Forces was always my first choice for my profession because of the sheer thrill of being a leader of men in the forefront of a battle in a life of adventure, of a 'class' defined by values, and most of all, the duty to defend the country. I have also emulated my father, my uncles and my cousins from whom I learnt about these values at first hand.

My sons were educated in the best of schools and colleges in the country and even cleared many entrance exams at the All-India level after school and college, but when it came to finally choosing a profession, it was the Army, where my father and I had served too. As parents, we were glad that they were focused in their choice of profession from an early age. My sons motivated each other right from a young age. The elder son would correct the younger one if he was caught in an awkward

stance, by reminding him that he would never be selected into the army if he slouched!

Q. *You had won several recognitions and awards in the course of your career. Can you enumerate them?*

A. I have been a recipient of recognitions and awards for excellence in performance, right from the beginning of my career with the Army. It would be lengthy to enumerate all of them. Some of the outstanding ones are:

- As Colonel, I commanded my battalion in a highly terrorist-affected district of Assam. The tremendous success achieved by my unit in the operations against the dreaded outfit, United Liberation Front of Assam (ULFA), was recognised with the coveted Chief of Army Staff's Unit Citation. I was awarded the Army Commanders' individual citation twice.
- As Brigadier, I commanded a brigade in the insurgency-affected areas in Assam. I was awarded the *Vishshist Sewa* Medal by the President of India for outstanding performance of the Brigade.
- As Major General, I commanded a division in the North East, which is the biggest division of the Indian Army. I was awarded the *Ati Vishisht Sewa* Medal by the President of India for outstanding command of the division in insurgency-affected states of the North-East.



**As Brigade Commander in Assam
(standing in the centre)**

Q. *How is the spirit of patriotism cultivated in the soldiers? What kind of training and motivation instils this feeling in the new recruits?*

A. Most of our soldiers come from the rural areas of our country. Their sense of patriotism is unquestionable even though they may not be outwardly expressive about it. Even then, during the training period, the cadet/recruit is taught the importance of winning as a team member of his regiment. The spirit of regimentation leads to the spirit of 'nation first'. That is how pride and patriotism is instilled amongst the rank and file.

Q. How significant a role does the wife of a serviceman play in his life and that of the Armed Forces?

A. The wife of a serviceman of the Armed Forces sacrifices much on a daily basis, especially when her husband is serving at the borders. She manages the household and the family solely. No doubt, the family of the regiment comes to her support in times of crisis. The wife of a senior officer also helps in counselling, supporting and motivating the new wives in the regiment, especially when their husbands are immediately called away to the borders on duty.

Q. How do you lead your retired life, in contrast with the active, frontline life you led while in service?



**A proud family
in the spirit of service to the nation**

A. After 38 years of service, and four years into retirement, I have homed into a routine that includes reading, golfing, helping around the house, and in the company of friends. I also take classes for young officers and mentor aspirant officers. I write professional articles especially on insurgency and terrorism, having served more than twenty years in this

environment.

Music plays a very important role in my family life. Both my wife and I sing, and I play the guitar and the keyboard. Post-retirement, I have started practising on the saxophone, the trumpet, the flute, the clarinet and my newly acquired 'toy', the aerophone.

Q. *What is your advice to the civilian youth who aspire, or to inspire them, to join the Defences?*

A. Consider a career in the Armed Forces seriously. No amount of money can give you the thrill of serving the country, and commanding men. While doing so, get your priorities right – career first, romance and worldly pursuits, later. Be an achiever. Your endeavour at all times must be to excel so that you and your loved ones will stand tall and proud whenever your name is mentioned in any forum.

***by Susan Koshy, Editor-in-Chief, in conversation with Maj
Gen Binoy Poonnen, AVSM, VSM, Mahar Regiment
(Infantry)***

Source : Dec 2018 issue of PreSense

Celebrate Heroes, not Anti-Heroes

The 10th edition of Sansad Ratna Awards' function was held on 19th January 2019 at Raj Bhavan. It was organised by your eMagazine PreSense to honour outstanding Indian Parliamentarians. Out of the 12 awardees, 4 were first-time Members of Parliament (MPs). Our recent analysis of the performance of Lok Sabha Members till the end of the Winter Session 2018 revealed that first-time MPs performed excellently in the House. We also found them enthusiastic about their contributions in their respective constituencies.

Unfortunately, we have also observed that the media tends to focus on, and project 'anti-heroes' to a greater extent than the 'real-heroes', who have been dedicated and committed in their work. In the past one decade of our experience with the Sansad Ratna Awards, we have observed that many times, the main line media have not found the success story of these achievers and heroes of the Indian Parliament, newsworthy.

Let alone the media, even political parties tend to ignore these heroes. There seems to be a high level of 'insecurity' in the second and middle level leadership in many parties, when they find active, vibrant youth in their own cadre. These seniors seem to dissuade these young and vibrant leaders from showcasing their talents. A couple of years ago, when an active Member of Legislative Assembly (MLA) of a regional party won an award at the national level for his performance, he desisted from publicising his achievement. Instead, he kept the information confidential in order to safeguard himself from the displeasure of the party leadership.

During the recent 10th edition of the Sansad Ratna Awards event, one of the vibrant volunteers belonging to a particular regional political party, shared his 'selfie' taken with an award-winning Parliamentarian who belonged to a different political party. That same night, he was removed from his party position. At the

same event, another volunteer belonging to a different regional party avoided being seen with the awardees belonging to parties of opposite ideologies. When asked, he replied, "I would be suspended from my party, if they knew about my meeting with MPs of opposite ideologies". This seems to be the 'tolerance' that political parties display within their parties while they propagate the ideology of tolerance on the public forum.

PreSense appeals to all political parties, particularly the regional parties, to show maturity and better tolerance in their attitude and allow their junior cadre and young leaders to mingle with leaders of other parties and ideologies. A well-informed and knowledgeable cadre is the strength of the party, and to build our beloved nation.

India is getting ready for the election of Parliamentarians for the 17th Lok Sabha. All the political parties are identifying their candidates for the Lok Sabha elections. PreSense appeals to the leaders of all the political parties to select as many young and vibrant candidates as possible, who do not carry any criminal record. Political parties can evolve their own mechanism to identify these real 'heroes' within their own ranks. PreSense also appeals to parties to identify the talents within their own cadre and promote them in the interest of the nation, instead of confining only to known faces.

***by Prime Point Srinivasan, Publisher & Mg. Editor,
Source: Jan 2019 issue of PreSense***

The Global Educational Scenario - Part I - School Education

What Does Education Mean to Mankind?

Education involves the acquisition of knowledge, learning of skills and guiding/leading others. The word education has two etymological sources, namely "*educare*" and "*educere*". These two Latin origins are sometimes used interchangeably. "*Educare*" means "to mould" or "to train" while "*educere*" means "to lead out" or "to lead forth" or "to bring out and bring forth what is within". Education ensures significant progress at the personal and societal level. The higher the educational level, the higher the nation advances economically.

Education Systems in India, Finland, Singapore, USA, Australia and Hong Kong

The Education system in India is based on 5 years of primary education and 3 years of upper primary, followed by 2 years of high school, from the age of 6 upto 16 years. This is followed by 2 years of higher secondary education and finally 3 years of college education for a bachelor's degree.

Let us examine some of the countries that are well-known for their good standards of education. In Finland's education system, compulsory education starts at 7 years of age, with a maximum of one year of pre-school education. There is a national core curriculum, but the timetable and the delivery are left to the schools and teachers. There is no selection in terms of formal tests or national examinations at any stage prior to higher education until matriculation (end of secondary education), at which stage it is required for entry to post-19 education.

The education system in Singapore which is considered among the best in the world has a scheme of Pre-school (3-6),

compulsory primary education (6-12), secondary education (12-17) and tertiary education. It is worth noting that at the end of primary schooling, children have to write the Primary School Leaving Examination which is highly competitive and decides the secondary school allocated to the child.

The education system in USA is based on free and compulsory primary and secondary education; however, the age by which children are compelled to begin and allowed to finish education varies from state to state. Typically, education is compulsory from first grade (usually at age 6) to tenth grade (age 16). At the end of the secondary school, most students sit for the SAT (Scholastic Aptitude Test) examination in order to pursue tertiary education.

The education system in Australia is based on compulsory primary and secondary education from the age 6-19. Prior to primary education, there is pre-primary education which is not compulsory. After secondary education, there is tertiary education at universities or technical schools.

The education system in Hong Kong consists of a voluntary three years' kindergarten, compulsory 6 years of primary and 3 years of secondary education, selective 3 years of senior secondary based on performance, and finally tertiary education offered at universities.

If we summarise the education system of most of the countries in the world, we find that primary and secondary education is free and compulsory in many countries around the world. In most countries, education is compulsory up to the age of 16.

Policy Responses to Private Tutoring / Assisted Learning

Governments of different countries have adopted one of the following approaches in response to the phenomenon of private tuitions, namely, the *laissez-faire* approach, monitoring but no intervention approach, regulation and control approach, encouragement approach, mixed approach, and a prohibition approach. Many countries view private tutoring as an assisted

mode of learning.

Development of Individuals, Societies and Nations through Education

Education is recognised worldwide to benefit individuals and promote national development. Educating girls and boys produces equal increases in their subsequent earnings and expands the future opportunities and choices for both boys and girls. The meaning, purposes and benefits of education all ultimately point towards the economic advancement of the country. Education is the only tool through which we can transform a nation. Therefore, every country must have the best methods of teaching, evaluation and continuous improvement, based on international benchmarks.

Finland - A Role Model

The school education system in Finland is deemed to be the best in the world (*Ref. video:*

https://www.youtube.com/watch?v=E_W2oS6HvTo).

Finland has high levels of literacy and mathematics. The students must take many important classes like physics, mathematics, chemistry, biology, human geography, history, music, two foreign languages. The country provides equal opportunities in education for all its citizens. This opens the door for many opportunities in the global job industry. One of the major reasons behind the success of education in Finland is that its teachers undergo very high levels of preparation, as compared with other countries.

Why Finland Teaches Better than India

- Finland grooms its school teachers to very high standards of education in preparation. Every teacher is screened for his/her suitability before being appointed and the levels are continually evaluated and re-oriented, to ensure that high standards are maintained. With this grooming, every teacher

considers his/her job a national mission. They are highly valued and revered as Finland considers childhood as the foundation for lifelong development. Their pay levels are also very high. Finland's teachers are encouraged to create their own mini-laboratories for teaching styles, keeping what works and scrapping what does not.

In India, the average quality of its teachers dips, when compared to that of teachers in Finland, based on the measurement of global metrics, warranting a tighter selection and orientation procedure. Besides, the teachers in India have to follow a standardised curriculum and syllabus, constrained by the timetable to complete it within the time frame, to provide their students enough time to prepare for the standardised and competitive examinations at the end of the year. Even though the government-level pay scales for teachers are reasonably good, the motivation towards the profession is not rightly skewed. Most private schools pay their teachers poorly, while setting high expectations and targets with little compensation or motivation.

- All Finnish students are given a similar standard of education without differentiating students from different economic and societal levels. As far as students and parents are concerned, there is no 'competition' while studying, only cooperation. Finland has no private schools. Every academic institution in the country is funded through public money. Teachers are trained to issue their own tests instead of standardised tests. In India, competition is high as each educational institution strives to 'produce' high results as a measurement of its standards. Private tutoring is also often required to compensate for the poor standard of education in schools in general. They are usually very expensive and unaffordable for the poorer students.
- Finland continuously monitors its education standards with a global perception, and revises its own standards upwards periodically, taking into account the national ambition to be on the top in education. There is little political interference in formulating its policies. In India, the education policy is in dire need for review to bring about a better qualitative level of learning and skill training.

- Finnish law requires teachers to give students 15 minutes of playtime for every 45 minutes of instruction. Playtime is important in their curriculum. Studies have found that students given at least one daily recess of 15 minutes or more, behave better in school and do better in assignments.
We find playgrounds and playtime disappearing from the schools in India, especially among the newer ones that have emerged over the recent years. Students are driven to excel only academically, with little time for extra-curricular and sports activities, even though these are essential for the wholesome development of the personality of the child.
- Finnish students have little homework as the Finnish regard time at home for connecting with the family with quality time. In India, children are burdened with homework and additional assignments so that they are left with little family and personal time.
- Since 1978, Finland provides free meals to all pupils, in all classes, in all schools in the country. In India, many state Governments do provide noon meal schemes, but it is not a national scheme.
- Since the Finnish people are appropriately educated, they ensure the election of the right law makers. If the economic performance of the incumbent party is good, they are voted again otherwise their vote goes for the opposition. Election campaigns have only news value and they do not sway opinions. India has a long way to go before it can boast of a good education policy that will benefit its children and the growing generation of future citizens and stakeholders of future India.

Conclusion

Education is the key to everything that is good in our world today. All the children must be initiated into compulsory and good standard of education to mould and motivate them so that they can, in turn, contribute to the development of their nation and to the entire mankind, as they pursue their own personal goals that sync with those of the nation and mankind.

by Prof R. Jagannathan, Editorial Advisor

Source : March 2019 issue of PreSense

The Global Educational Scenario – Part II Higher Education and Research

Significance of Higher Education and Research

A better standard of living, economic stability and ability to govern oneself in a near ideal manner are some of the long-term fruits of higher education and research. Nelson Mandela said, "Education is the most powerful weapon which you can use to change the world". In the contemporary world, there are about ten countries in the world, which have been consistently evolving their higher education system towards this goal in an enviable manner.

Benchmarking Higher Education System Performance

Metric Benchmarking: Metric benchmarking presents performance information. Countries will be able to use this information to identify the strengths and weaknesses within their own higher education systems and compare their performance against other countries.

Policy Benchmarking: Government policy is a key driver in the performance of higher education systems. This benchmarking exercise analyses policies to better understand the linkages between policies and outcome. The comparison of policies and outcome between different systems will help countries learn from each other and develop new policies for improved performance.

Practice Benchmarking: Higher education practices in education, research and engagement are driven by the input (financial and human resources) allocated to the system. The output of higher education – what it delivers (e.g. graduates, publications, start-up companies etc.) – are the products of these processes. Practice benchmarking will facilitate a better understanding of the

reasons behind these output measures. It will also help identify effective practices, which can be shared among countries and stimulate performance, innovation, and what works in higher education.

Taking into account the different benchmarking, the best countries of the world ranked by their performance outcome is presented below:

Ranking of Best of Best Higher Education Systems

Global Ranking	U21 Ranking (Overall)	U21 Ranking (GDP-based)	QS Ranking
1	USA	UK	USA
2	Switzerland	Serbia	UK
3	Denmark	Denmark	Germany
4	UK	Sweden	Australia
5	Sweden	China	Canada
India's Rank	49	15	24

(For full list released in January 2019,

ref: <http://www.trinityhenderson.com/best-higher-education-system-in-the-world-2018/>)

Ranking of Best of Best Research Systems

Rank	Country	Country's Population in Crore (Millions)	Number of Nobel Laureates from the Country
1	USA	32.7 (327)	375
2	UK	6.7 (67)	129
3	Germany	8.3 (83)	108
4	France	6.5 (65)	69
5	Sweden	1.0 (10)	32
-	India	137.0 (1370)	10

Higher Education and Research in India and Some Other Countries

Higher education system in India is based on 3 years of bachelor's degree programme in liberal arts and science or 4 years of bachelor's degree in engineering or technology. This may extend to 5 years for some professional degree programmes like medicine and select engineering streams. Graduate students can take up a 2- or 3-year master's programme. For a Ph.D (Doctorate) programme, there is a standard format *sans* a rigorous control on the quality.

Let us examine some of the countries, well-known for their good standards of higher education.

- In USA, university education prescribes high standards of learning outcomes and hence the graduation, masters and the doctoral programmes invariably produce great thinkers. Incidentally, most of the Nobel Prize winners hail from USA.
- Higher education in UK is respected all over the world for its renowned standards and quality. Many eminent people in different professions, whose work has gained global recognition, come from British universities. Some of these universities and other higher education providers are ranked among the top universities in the world. UK's capital city, London is considered the world's capital city for higher education. With its four universities ranked among the world's top ten, London has the highest number of top worldwide ranked universities per city. When the high school is over, Britons have to sit for a standard examination, which decides their eligibility to continue their education in the higher level of education.
- In Germany, universities are independent with no interference from federal or state governments. Universities set their own global cutting-edge standards. Professors and researchers concentrate on teaching and research activities. They are divested of administrative responsibilities.
- In Switzerland's higher education system, the first degree takes 4 to 5 years (for medical degree, it is 6 years). The first degree of Switzerland is considered equivalent to a master's

degree of USA. The Swiss economic miracle is based on the intensive development of the country's intellectual potential, to which the authorities and all governments, over the centuries, gave special consideration.

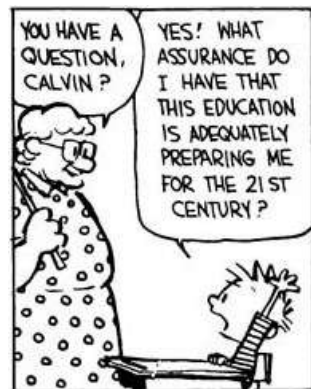
Why These Countries are Better than India

- In the above listed top ten countries, higher education and research aims at extraordinarily high learning standards, addressing the basic needs of mankind.
- Becoming a university teacher/researcher in these countries requires excellent qualifications, maturity and proven leadership skills.
- Admissions to these universities are based on performance in the selection process without any discrimination based on religion, caste, creed, gender and even nationality.
- The students acquire knowledge and not just information in the course of their higher education/research so that they become globally employable in leadership positions.

Challenges Facing Indian Higher Education System

Lack of Quality Research Work: There is no shortage of funding for the top Indian Institutions such as IITs, IIMs and other institutes of national importance. However, due to the limited focus on research and internationalisation, very few Indian higher educational institutes are globally recognised in this area.

Besides, the senior professors are often loaded with administrative work, with little or no teaching or research workload. As senior professors, they draw high salaries but they do not take any class or do any research. A recent news report from The Times of India newspaper revealed that senior professors of Anna University struggle to set question papers for semester examinations. These instances are only a tip of the



iceberg. No doubt, IITs, NITs and similar other premier institutions are exceptions to this phenomenon, as even their Deans/Directors take classes and do research.

The number of research papers published in India has increased considerably in the past few decades but they are low in citation impact when compared with other countries like Germany, USA, France and China.

Poor Quality of Curriculum: Higher education in India is faced with the problem of poor quality of the curriculum. In most of the higher educational institutes, the curriculum is out-dated and irrelevant.

Shortage of Faculty and High Student-Faculty Ratio: In most of the state and central universities, more than 30% of the faculty positions lie vacant, while student enrolment for higher education is growing at an accelerated rate, especially in the past few years.

Inadequate Infrastructure and Facilities: Except for the highly recognised higher educational institutes in India, most of the other colleges and universities lack basic and high-end research facilities. Many institutions run without proper infrastructure and basic facilities like library, hostels, transport, and sports, which are desirable indicators to rank the standard of the institution.

Currently, there is little collaboration between the higher educational institutions and the industry sector.

Low employability of graduates is a major problem in India. Only a small proportion of Indian graduates are considered employable. Placement outcome also drops considerably as we move away from the top institutes.

Problems of Higher Education in India at the Macro Level – A Perspective

India's large pool of young people might be considered its biggest strength. Unfortunately, India falls short in putting its act

together when it comes to figuring out how to educate these young people. Government data suggests that only one out of every seven children born in India goes to college.

India has a population of about 234 million in the age group of 15–24 years. If India aims to increase its Gross Enrolment Ratio from its present 19% to 30% by 2020, as planned by the Government, India needs to open up at least another 521 universities, 10,510 technical institutions and 15,530 colleges.

India has permitted the private sector to enter the higher education sector to the tune of 59% of the capacity. Over the past decade, people who did not know enough about education – mostly business people with surplus cash, especially from the real estate sector – set up private colleges and universities. Given the fact that they are not academically-oriented, they do not know how to create the ideal environment for education. Unfortunately, students from rural and semi-urban backgrounds fall prey to the lures of these unrecognised institutes and colleges.

UGC (University Grants Commission) and other regulatory authorities have been trying very hard to extirpate the menace of such private universities which run courses without affiliation/recognition.

Indian Higher Education System - in a Nutshell

"Our university system is, in many parts, in a state of disrepair; in almost half the districts in the country, higher education enrolments are abysmally low; almost two-third of our universities and 90% of our colleges are rated below average on quality parameters. I am concerned that in many states, university appointments, including that of vice-chancellors, have been politicised and have become subject to caste and communal considerations. There are complaints of favouritism and corruption." – Former Prime Minister, Dr Manmohan Singh in 2007.

In order to attain and sustain the quality of institutions, certain practices need to be strictly followed, viz. selection of staff by

merit and continuous staff development through appropriate programmes for academic development. These programmes include appropriate teaching/learning methodology, and mobility of students and faculty between countries, and between higher education institutions and the industry for better exposure to quality education and industry practices. Internal self-evaluation and external review must be conducted in a transparent manner by independent specialists, preferably with international experts.

If the government welcomes such initiatives, the future will be ours. The report of the National Knowledge Commission, if implemented, can help boost the education sector in India. We will be able to match and compete with other countries, and the dream to be the world's greatest economy will not be difficult to achieve. The roots of higher education and research are bitter but the fruit is sweet.

By Dr R.Jagannathan, Editorial Advisor
Source : April 2019 issue of PreSense

Young Indian Professionals in USA – Need for Better Personal Skills for Better Prospects



Recently, PreSense had the opportunity to interact with an established HR Consultant, **Ms Gunjan Kuthiala**, who specialises in Talent Acquisition in USA. In an exclusive e-interview for your eMagazine, Ms Gunjan shared her views about the prospects of young Indian graduates and professionals, who are looking for work prospects or to better the scope of their jobs in USA. We reproduce below the interview:

Q1. *How many Indians are employed in USA and how are they positioned there jobwise?*

As per a 2016 survey, there are about 3.4 million Indians living in USA. They contribute to the high-tax payer bracket as either IT (Information Technology) professionals or doctors. Some are running successful business enterprises.

Q2. *How does the USA Government perceive Indians as prospects for employment in their country?*

The most common work visa issued by the US Government to Indians is the H1-B or L1 Visa, depending on the terms of the employment and filed by the employer. Most of the large corporate jobs companies especially in the IT sector in the states of California, Texas, New York, Massachusetts and New Jersey have a majority of Indian H1-B visa holders.

Q3. *What is the latest trend of Indians getting employment in USA?*

Indians are generally well-known here for their logical and analytical thinking skills and are mainly employed in the IT sector. It is easier for graduates and young professionals from India to obtain the H1 visa to pursue their Masters in USA or be employed in the IT domain as most employers have a higher annual H1 Visa hiring quota from talent acquisition strategy perspective. The much sought-after skills currently in the USA market are latest technology Software Engineers such as Java/J2EE, Front-end Engineers, UI Developers, Data Engineers, Software Architects, Cloud Engineers, Systems Engineers and Network Engineers. We find that these are the positions for which Indians are most commonly hired.

Q4. *Does pursuing higher education in USA facilitate the Indian youth in getting employment in USA? If so, what are the qualifications required to study in USA?*

After completing Bachelors or Masters in USA, one usually gets F1/OPT (Optional Practical Training) visa usually for 27 months. It allows one to work in USA after completion of the studies. Most good colleges in USA have Co-op programs which allow students to get experience in the corporate sector as part of their education curriculum. Co-op is a short-term work permit issued by the college. Most employers subsequently process for the H1 visa for those employees working with them on OPT visa, depending on their performance while with the company.

Therefore, pursuing further education in USA does help in career opportunities in USA. I personally recommend a Bachelor's degree in India and then after some experience, pursuing Masters in USA so that when looking for a job in USA, the graduate will have the advantage of experience and a good academic qualification. I also recommend maintaining a minimum of 3.4 GPA (Grade Point Average which is the accumulated grades earned during the academic course) to improve the prospects of getting a personal interview faster.

Q5. What are the visa regulations and salary guidelines for Indians employed there?

Currently, the minimum wage for H1 visa holders is \$60,000 per annum but the law is contemplating increasing it to \$90,000 per annum. Most employees on H1 visa are able to earn more than the minimum wage dependent on their skills, experience level and the state's cost of living.

Q6. *What is the general shortfall you find among the Indian youth who seek international employment or compete internationally? What do you suggest to overcome this shortfall?*

Indians generally excel in technical interviews but they lack personal skills and their research on their potential employers. My advice to the Indian youth aspiring to relocate in USA is to first gain experience and also work on their interpersonal skills as they are important while facing interviews. Good communication skills play a vital role in phone interviews and help to establish a good rapport with the interviewers in personal interviews.

Q7. *What do you find lacking in the resumes you receive from Indian job seekers?*

A focused resume explaining one's potential for the applied job increases one's probability of creating a good first impression and hence resumes reflecting frequent job changes reflect lack of stability in the prospective candidate. I would advise employees to not change jobs too frequently as this does not create a good impression with most recruitment managers.

Q8. *Any other advice that you would like to add for the benefit of the Indian youth who read PreSense?*

In USA, hands-on experience is given more weightage than education. I suggest the Indian youth to practise working on projects related to their line of education so that the experience will strengthen to the resume when hunting for jobs in India or

USA. Hands-on experience gives clarity to the theoretical knowledge acquired in the classroom.

Ms Gunjan Kuthiala heads Jobgini (www.jobgini.com), a software application for job seekers to manage their job search. Besides career coaching, she is involved in holding seminars on best practices of resume building and job hunting in colleges, and supporting clients with recruiting drives. She holds an Executive MBA and a Masters' degree in Computers. She also owns NRILIFE Productions, an organisation supporting development of talents among local NRIs in USA. Ms Gunjan can be contacted at admin@jobgini.com / gunjan@nrilife.us

by Susan Koshy, Editor in Chief
Source : April 2019 issue of PreSense

The Pride of India –

Achievement of Institutions and Services in the Country

India as a country has travelled a long way since its independence. India is the world's largest and oldest continuous civilisation. As per the 1961 census, India had 1,652 languages. It has the world's largest democracy, is rich in culture and tradition, is known for its warmth in hospitality, and has vision and passion. There have been great moments of immense pride for Indians to belong to this great country, and for good reasons. One of the reasons is that India has the second largest pool of scientists and engineers in the world, and they are doing a great job behind the scene, building India and etching its name in the hallmark of achievements.

ISRO

Indian Space Research Organisation (ISRO), established on August 15th 1969, has the motto "Space Research to Benefit the Nation". With a mere \$90 million annual budget, it has developed the cryogenic technology indigenously, and produces all the rocket and satellite components inhouse. ISRO has its own atomic clock and plans to have its own GPS (Global Positioning System). India is the only country which was able to reach the moon in the first attempt itself. Again, India is the only country to have put in orbit 104 satellites in one launch itself. The mission to Mars was flawless in the first attempt itself.

ISRO's achievement is especially commendable when we compare with NASA of USA. NASA, with an annual budget of around \$1200 billion and an enviable record of more than 1000 successful unmanned launchings and about



200 manned launchings, was able to reach the moon only after 12 failures. NASA's Mars mission cost 10 times more than ISRO's Mars mission. However, in all fairness, compared to NASA's

expertise on deep space rockets and satellites, ISRO's space journey is still in the infant stage.

DRDO



The Indian Defence Research and Development Organisation (DRDO), established in 1958, does researches through its respective specialised research boards in Life Sciences (LS), Missiles and

Strategic Systems (MSS), Micro Electronic Devices, Computational Systems & Cyber Systems (MED, CoS), Aeronautical Systems (Aero), Electronics & Communication Systems (ECS), Armament & Combat Engineering Systems (ACE) and Naval Systems and Materials (NS&M).

Like USA, India officially has the following as its own: unmanned, armed, combat aerial vehicle and unmanned tank, nuclear delivery capability from land, air and sea, self-ejectable black-box for airplanes, anti-satellite system, electronic intelligence satellite and inter-continental ballistic missiles - all developed at DRDO.

Nuclear Research

As of 2016, India has signed civil nuclear agreements with 14 countries, viz. Argentina, Australia, Canada, Czech Republic, France, Japan, Kazakhstan, Mongolia, Namibia, Russia, South Korea, the United Kingdom, the United States, and Vietnam.



India produces more than 75 radioisotopes benefitting more than 10 lakh (1 million) cancer patients annually through about 120 nuclear medicine centres and through the National Cancer Grid. India is the first country in the world to purify blood using certain liquid nuclear wastes and even countries like USA buy these blood purifiers commercially from India. India now has a Global Centre for safe, sustainable and secure nuclear energy operationalised in India, in collaboration with the International Atomic Energy Agency.

On the military front, India has a declared nuclear No-First-Use (NFU) policy and is in the process of developing a nuclear doctrine based on "Credible Minimum Deterrence" which assures second strike capability.

Health

World Health Organization (WHO) has officially declared that India is 'Polio Free'. As a vast country with a very large population, eradicating polio is no mean feat and it is a commendable achievement that all Indians should be proud of.

The health care facilities available in India is world class, both in terms of the competence of its physicians and surgeons as well as hospital infrastructure. Besides, the cost of healthcare is low (an ultrasonic scan of the abdomen costs about ₹350 in India as against about ₹25,000 in USA) and the waiting period in India is 'little to no waiting period'. (An average American has to wait for about 2 to 3 weeks for a dental root-canal treatment whereas in India you can get it done even without an appointment in some cases).



The facilities offered at the specialty hospitals in India are at par with other world class centres. It was found that the cost of treatment in India start at around one-tenth of the price of comparable treatment in the United States or in the United

Kingdom. This economy has drawn many patients from across the world to India, mostly for alternative medicine, bone-marrow transplant, cardiac bypass, eye surgery, and hip replacement.

In India, anyone in the general public can visit a doctor at any time they need to, order any investigation and get any procedure done as per their plan - such options are not available even in developed countries like USA and UK.

A Great Leap for Integral Coach Factory

The "Made In India" initiative has made India visible across the world, with our metro trains and monorail trains finding ready markets in Brazil and Australia. Other western countries are also positively looking at India. With



an aim to turn the country into a global manufacturing destination, a total of 450 metro coaches are to be made in India for export to Australia over a period of the next two and a half years.

Our Society

India is one of the most diverse lands in the world. From language/dialect to dressing-style, the country has been hailed as one of the most complex amalgamations of various cultural identities.

India produces the largest number of engineers in the world. India is the second largest troop contributor in the world to the UN (United Nations) Peacekeeping. India is the largest producer of feature films in the world. India has the largest English-speaking population in the world. India has the largest number of vegetarians in the world. India has the largest workforce in the world. Thus, we find that India's large population is its asset.

Our Nature

UNESCO has included the Western Ghats in the list of World Heritage Sites, along with 39 other places in India. The Western Ghats is considered one of the top eight hotspots of biological diversity in the world. The area plays host to around 5,000 species of flowering plants, 139 mammal species, 508 bird species, 179 amphibian species and 288 freshwater fish species. It is believed that many undiscovered species live in the Western Ghats and at least 325 globally threatened species are found here. The perennial rivers like the Ganges, Brahmaputra, Yamuna, Narmada, Tapti and Sindhu with their river basins are amazing wonders of India.

Conclusion

The large number of different cultures in a closely knitted matrix makes India's diversity one of the wonders of the world. India has everything for every Indian to feel proud about. It is time for all Indians to celebrate the diversity and achievements of this great country, and infuse pride in the succeeding generations of India. In 1982, when the first Indian to go into space, Rakesh Sharma was asked by the then Indian Prime Minister, Mrs Indira Gandhi, how India looked from outer space, he replied, "*Saare Jahan Se Achcha*" (meaning "better than the rest of the world"), taking the cue from the Indian patriotic song, "*Saare Jahan Se Achcha, Hindustan Hamaara*" (meaning "Better than the rest of the world is our India").

By Dr R.Jagannathan, Editorial Advisor

Section II: Spotlights from History

First Meeting of Narendranath (Vivekananda) with Guruji

How many of us are aware that William Hastie, a relatively less featured individual of the British-Indian era, is the person behind Narendranath's (original name of Swami Vivekananda) transformation by motivating him to meet Sri Ramakrishna Paramahansa?

Revered William Hastie



Reverend William Hastie

Photo courtesy: The Hindu

Scotland-born William Hastie, after distinguishing himself in physics and mathematics, pursued his studies in philosophy and divinity in Germany and Holland. Since he was not interested in priesthood, he received the licence from the Church of Scotland to teach abroad. In 1878, he joined as the principal of the 'General Assembly's Institution' (now called the Scottish Church College, Kolkata).

After joining this college, Hastie restructured the Department of Philosophy. The scholastic reputation of Principal Hastie attracted Narendranath to join this college in 1881. William Hastie's simple lifestyle attracted his students.

State of Trance or Spiritual Ecstasy

One day, Reverend William Hastie was discussing the poem, "Excursion" written by poet William Wordsworth, in the class where Narendranath was present. He was explaining how the poet fell into a state of 'trance' (spiritual ecstasy) when experiencing the sublime beauty of nature. Hastie suggested to the students to meet Sri Ramakrishna Paramahansa, a priest at Dakshineswar (Kali Temple), who had attained the status of 'trance'.

Meeting of Narendranath with Sri Ramakrishna

The 19-year-old Narendra was excited about this suggestion. He immediately met Sri Ramakrishna Paramahansa in December 1881. He had a volley of questions for him. This meeting of two great souls became the turning point in the spiritual history of India.

After failing to get satisfactory answers of real time experience from other people, Narendranath questioned Sri Ramakrishna, "Have you seen God?" Sri Ramakrishna spontaneously responded, "Not only have I seen God but I can show Him to you too. I see Him more intensely than I see you".

This conversation influenced the mind of Narendra in that historic moment and he surrendered himself completely to Sri Ramakrishna Paramahansa. This is the beginning of the spiritual journey of Narendranath, who later became Swami Vivekananda.

***By K Srinivasan, Editor in Chief, PreSense
Source: July 2013 issue of Ezine PreSense***

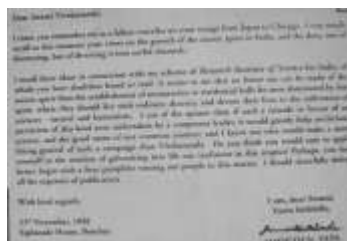
Indian Institute of Science – Swami Vivekananda's Vision, Executed by Jamshedji Tata

India is celebrating the 150th year of Swami Vivekananda's birth. He is a great source of inspiration to the Indian youth. From this issue for another 12 months, PreSense will bring out interesting episodes from the life of Swami Vivekananda to inspire the readers.

Many Indians may not know that Swami Vivekananda was not only a great spiritual leader, but also a visionary for promoting science. In 1893, when Jamshedji Tata and Swamiji were travelling together in a ship from Japan to USA, Tata told Swamiji that he was going to USA to bring the steel industry to British India. Swamiji blessed Tata for his venture and suggested that the steel industry consists of two components viz. (1) science of steel and (2) manufacturing of steel. Besides bringing the manufacturing technology, Swamiji suggested to Tata to develop the 'science of steel' in India itself.

Visionary Tata took Swamiji's advice very seriously. From that day, Tata started visualising both the steel industry and a world-class Science Research Institute in India.

On 23rd November 1898, Tata wrote a personal letter to Swamiji, recalling their conversation on the ship and requested him to be the captain of the new Science Institute and guide the initiative. Since Swamiji was busy in the setting up of the Ramakrishna Mutt, he could not accept this invitation. Swamiji passed away in 1902. However, Tata continued the mission of establishing a Science Institute at Bangalore, donating a part of his property for the purpose. Jamshedji Tata too passed away in 1904. His successors took the initiative forward and launched the Indian Institute of Science known as Tata Institute at Bangalore in 1909.



The Tata Institute continues as a world class Science Research Institute, symbolising the vision of two great sons of India, *Swami Vivekananda and Jamshedji Tata*.

Source: January 2013 issue of Ezine PreSense

Interesting Facts and Unknown People Behind Swami Vivekananda's Visit to Chicago

Swami Vivekananda's Visit to Ramnad

After Shri Ramakrishna Paramahansa's passing away in 1896, Swami Vivekananda began a padayatra of the country. In 1892, he visited Ramanathapuram and stayed with Bhaskara Sethupathy, the King of Ramnad. Shri Bhaskara Sethupathy, even at his young age of 24, was a great scholar in Saiva philosophy. At that time, he received an invitation for the 'Parliament of World Religions 1893', to be held in Chicago and was preparing to travel to USA.



When Bhaskara Sethupathy interacted with Swami Vivekananda, he realised that Swamiji was the right person to attend the World Parliament of religions and to present the Indian spiritual views. He became Swamiji's disciple and requested Swamiji to go to USA to attend the World Parliament of Religions. He was even willing to fund his trip to the extent possible by him, cancelling his own visit. Swamiji initially declined this offer.

Decision at Kanyakumari

Swami Vivekananda then moved to Kanyakumari, the southern tip of the country on 24th December 1892. There is a rock in the sea, 500 metres from the mainland. Since the fishermen were busy celebrating Christmas Eve, no one was willing to take him to the rock. Without hesitation, he swam across the sea and reached the rock. He was in meditation for two days on the rock and got enlightenment about his duties. He decided that he

would go to Chicago to participate in the World Parliament of Religions. This rock is now known as the Vivekananda Rock Memorial and it is a popular tourist place.



Vivekananda rock memorial at Kanyakumari where Swamiji got enlightenment

Swamiji then returned to Ramnad and stayed with Bhaskara Sethupathy. He accepted his suggestion of going to Chicago and participating in the World Parliament of Religions.

Support by the Madras Students

From Ramnad, he visited Madras (now known as Chennai). Since he was in need of more money, Mr. Azhagiya Singaperumal, a professor of the Pachayappa's College, Madras and many of his students went on a door-to-door collection of money to raise funds for Vivekananda's USA trip. Swamiji was highly motivated by the enthusiasm shown by Bhaskara Sethupathy and the people of Madras about his journey to USA. He left Madras for Bombay to continue to Chicago by ship.

Returning to India after a victorious trip to America and Europe

After Swami Vivekananda's Chicago speech, he became very popular in India. After touring America and Europe for four years, he returned to India via Ramnad and Madras, as a mark of gratitude to the people who had encouraged him to go to Chicago.

On 26th January 1897, he returned to India by a steamer from Sri Lanka. As he was about to land at Pamban, Bhaskara Sethupathy, the King of Ramnad, who was waiting with his entourage, gave him a royal welcome. He reverentially bowed his head and offered it as a step for Vivekananda to land from the boat as Vivekananda was returning to Motherland after five years. But, Swamiji tactfully avoided by jumping from the boat onto the land. Since the king was kneeling down in this place to receive Swamiji, this place is now known as 'Kundukal', in Tamil, meaning 'kneeling down'. A memorial is also erected in this place



to mark the historic landing of Swamiji after his visit to Chicago, successfully establishing himself as the Spiritual Ambassador of India.

After landing, Swamiji was to be taken in a procession to the town in a chariot, drawn by six horses. After Swamiji boarded the ceremonial chariot, Bhaskara Sethupathy suddenly unyoked the horses from Vivekananda's ceremonial chariot and pulled the chariot manually with his entourage till it reached his palace, in spite of the repeated cries of "no no" by Swamiji.



Later he erected a victory pillar of 25 feet height with the Upanishad expression Satyameva Jayate to commemorate the success of Swami Vivekananda at Chicago.

***By K Srinivasan, Editor in Chief
Source: March 2013 issue of
Ezine PreSense***

Jai Ho – Indian Cinema hits Century



The Indian Cinema Industry entered the 100th year on 3rd May 2013. India ranks first among the nations which produce films and contributes nearly 23% of the films produced in the world.

Lumieres' Cinematographie

Within a year of Lumieres' first exhibiting their cinematographie in Paris, an agent brought the equipments and films from France and exhibited the moving pictures in Bombay (now known as Mumbai) on 7th July 1896. Within a few months, this was shown in Madras and Calcutta. It is said that when the Lumieres showed their moving picture of the arrival of a train on the screen, the audience rushed out of the theatre at Bombay and Madras fearing that they were going to be run over by the oncoming train.

The First Silent Movie in 1913

The first feature film in Marathi "Raja Harishchandra" (a silent movie) made by Dadasaheb Phalke was released on 3rd May 1913, marking the beginning of the Indian cinema industry. The film was Dada's first feature film venture of a full film length of 3700 feet (in four reels) and about 50 minutes of running time. It took seven months 21 days to complete the film. The film was screened at the Coronation Cinema in 1913 before an invited audience of representatives of the press, and guests. The film received wide acclaim and was a commercial success. Phalke followed it up by making films such as Satyavan Savitri, Satyawadi Raja Harish Chandra (1917), Lanka Dahan (1917), Sri Krishna Janma (1918) and Kaliya Mardan (1919). Dadasaheb Phalke was by then known as the 'Father of



Indian Cinema'. During the early days, no woman was willing to act in films and hence men were playing the roles of women.

The First Indian Talkie in 1931



The first Indian talkie 'Alam Ara' (with sound), directed by Ardeshir Irani (with sound), released in Majestic Cinema on 14th March 1931. This film had 7 songs. During that time, there was no sound proof recording theatres or dubbing. The shootings used to be held in the nights with actors acting and delivering the dialogues or singing live. The recordings used to be done with hidden microphones. Alam Ara ran for 124 minutes. This film changed the course of direction of Indian films. This film

was produced by "Imperial Movie-Tone".

Tamil and Telugu Movies

After producing Alam Ara in 1931, Ardeshir Irani made many talkies in the same sets at Bombay. In the same year, Bhakta Prahlada, the first Telugu talking film and Kalidas (in Tamil) were made in the same sets as Alam Ara. Both were directed by H M Reddy, one of the earlier assistants of Ardeshir Irani. Kalidas had multiple language dialogues and songs.

Newspaper Advertisement about Kalidas on 29th October 1931

It is reported that when the first film reels of Kalidas was brought to the Madras Central Railway Station, it was received by the people with great excitement. Although the film was released on 31st



October 1931, Swadesamitran, one of the leading Tamil dailies of those times wrote a review on 29th October itself, praising the movie.

Bhaktha Prahlada (Telugu talkie) was first released in Bombay on 6th February 1932 and then in Madras on 2nd April 1932. Later it was released in Andhra Pradesh, but no documentary proof is available on the date of its release in this region.

Gemini Introduced a New Style of Publicity

A turning point in the film industry happened when 'Chandralekha' was produced by Gemini S S Vasan in 1948. This was the first grand film in India produced at a cost of Rs.30 lakhs (Rs.3 million) during 1948. It had a magnificent dance sequence with a large number of dancers dancing on drums. This was also the first film in India to be released with sub-titles in 609 theatres in India and abroad. For the first time, S S Vasan spent heavily on huge publicity banners all over the country to promote the film. The face of the actress in a large mega poster in Bombay, attracted a large crowd at that time. The film, which was 207 minutes long, was produced in the popular 'Gemini Studios' and the production took 5 years. The film was released in April 1948.



Growth of Indian Cinema

From then on, the Indian cinema progressed faster. From the 'drama' type cinemas, real dialogue-oriented and music-oriented films evolved. Moving from the ancient epic-oriented films, directors started taking up social issues. From studio-oriented settings, the directors moved to real outdoor locations in villages, rivers and mountains for shooting their films.

Today, the Indian Cinema has acquired the capability in technology and creativity to match international standards. India is the topmost country in the world to produce the largest number of films. India produces around 1200 films every year. On an average, around 20 million people watch the movies in theatres every day. With the growth of television, cable TV, and exclusive film-oriented channels, more and more people are watching movies.

Hindi (Bollywood), Tamil (Kollywood) and Telugu (Tollywood) films constitute nearly three-fourth of the films produced in India. These films have also captured international attention.

Great Indian Directors

Many Indian cinema directors like Satyajit Ray, Mrinal Sen, V Shantharam, Dada Saheb Palke, Adoor Gopalakrishnan, K. Balachander, Mani Ratnam, Mahendran, L V Prasad, K Viswanath, Adurthi Subbarao and many more veterans have contributed in their own way to the growth of the Indian Cinema Industry.

Films Influencing Politics

In the past four decades, we have seen film personalities like MGR, NTR, Jayalalitha, Karunanidhi and Vijayakanth occupying high political positions in the South. The film industry still influences political decisions in Tamil Nadu and Andhra.

Serious Concerns

On the positive side, the Indian cinema has developed creativity and capability to match international standards. In the recent decades, it has also become highly commercial, focusing only on revenue. The involvement of underground people and black money has made the industry dangerous to be associated with.

Many of the young directors feel that the 'Masters' who are highly creative and take the industry to the next level, do not get recognised, and in their passion for films and creativity, they

undergo much humiliation. The industry, which provides employment opportunities to millions of people directly and indirectly, should get relief from the clutches of unwanted anti-national elements and work towards the development of the industry and the nation.

Input courtesy to P K Saravanan (Anna University) and Dhanapal Padmanabhan (Cine Director)

***By K Srinivasan, Editor in Chief, PreSense
Source: May 2013 issue of Ezine PreSense***

Gory Jallianwala Bagh Massacre – 13th April 1919

It was on 13th April 1919, when Punjab was celebrating the 'Baisaki' festival that more than 1000 people, including children and the aged of Punjab were ruthlessly killed by Dyer, who was later known as the 'Butcher of Punjab'.

Why did People Gather at Jallianwala Bagh?

After Mahatma Gandhi's active entry into the freedom movement



in 1915, the entire country was behind him in the struggle for freedom from the British. On 9th April 1919, two popular leaders, Dr Satyapal and Dr Saif ud-Din Kitchlew, were arrested by the Governor of Punjab, Sir Michael Francis O'Dwyer and they were deported from Amritsar. The same day, Mahatma Gandhi's

entry into Punjab was banned under the Defence of India Rules. This led to a protest by the people. In the shootout, 30 civilians were killed. The angry mob went on a rampage and killed five Europeans. Unnerved by the fury of the people, the Governor called in the army to manage the situation, and this infuriated the people further.

In the evening of 11th April 1919, Brigadier-General Reginald Edward Harry Dyer, commander of the 45th Infantry Brigade at Jalandhar, arrived in Amritsar with his troop. On 12th April 1919, he issued an order, prohibiting all meetings and gatherings.



Massacre

On 13th April 1919, which marked the Baisakhi festival, a large number



The narrow lane through which the army entered the garden.

Martyr well

of people, mostly Sikhs, had poured into the city from the surrounding villages. Local leaders called upon the people to assemble for a meeting in Jallianwala Bagh, a garden in Amritsar, at 4.30 in the evening. The meeting went on peacefully, and two resolutions, one calling for the repeal of the Rowlatt Act and the other condemning the firing on 10th April 1919, were passed. At about 5.15pm, when a

third resolution protesting against the general repressive policy of the government was being proposed, Brigadier-General Dyer entered the garden through a narrow lane with 50 riflemen and two armoured cars with machine guns mounted on them. He deployed his riflemen on an elevation near the entrance and without warning or ordering the crowd to disperse, they opened fire. The firing continued for about 20 minutes, after which, Dyer and his men marched back the way they had come. 1650 rounds of .303-inch ammunition were fired. This led to 379 being killed and 1200 wounded. Since there was no escape route, many people including children, fell into the well and died. This triggered a protest across the nation and led to the renunciation of the British Knighthood by Rabindranath Tagore.

The Fate of Dyer and O'Dwyer



Dyer

O'Dwyer

Udham Singh

After an enquiry, Brigadier-General Dyer was relieved of his army duties. The Governor, Sir Michael Francis O'Dwyer defended Dyer's action.

One Udham Singh (who later changed his name to Ram Mohammad Singh Azad), a 20-year old Sikh, who was disturbed mentally by this massacre took a vow in the Golden Temple to take revenge. After 21 years, on 13th March 1940, Udham Singh assassinated Francis O'Dwyer in London. He was arrested immediately and hanged to death on 31st July 1940.

While the English media in India condemned Udham Singh for assassinating Francis O'Dwyer, the vernacular media hailed him as a hero. Mahatma Gandhi and Pandit Nehru condemned Udham Singh. Dyer died of cerebral haemorrhage and arteriosclerosis on 24th July 1927 when he was 62 years of age. This Jallianwala Bagh massacre triggered the freedom movement further to drive the British out. A memorial is erected in this place.

***By Sukruti A Vadula, Editorial Team, PreSense
Source: April 2014 issue of Ezine PreSense***

First Transmission by BBC – November 1922



The privately-owned BBC (British Broadcasting Corporation) was the world's first national broadcasting organisation. It was founded on 18th October 1922 as the British Broadcasting Company Ltd by the British General Post Office (GPO) and a group of six telecommunications companies — Marconi, Radio Communication Company, Metropolitan-Vickers (MetroVick), General Electric, Western Electric, and British Thomson-Houston (BTH) to broadcast experimental radio services.



The first transmission was made on 14th November of that year, from station 2LO, located at Marconi House, London. That year, its founder John Reith became its first general manager.

In 1923, he became its Managing Director and in 1927 he was employed as the Director-General of the British Broadcasting Corporation, created under a Royal Charter (picture).

The Royal Charter is the constitutional basis for the BBC. It sets out the public purposes of the BBC, guarantees its independence, and outlines the duties of the Trust and the Executive Board. The current Charter runs until 31st December 2016. BBC is the first



public service broadcasting statutory corporation in the world. Its main responsibility is to provide impartial public service broadcasting in the United Kingdom.

The BBC is the world's oldest national broadcasting organisation and the largest broadcaster in the world employing around 23,000 staff. The BBC is a semi-autonomous public service broadcaster that operates under a Royal Charter and a Licence and Agreement from the Home Secretary.

Within the United Kingdom, its work is funded mainly by an annual television licence fee, which is charged to all British households, companies and organisations using any type of equipment to receive live television broadcasts; the cost of the fee is set annually by the British Government and approved by its Parliament.

Outside the UK, the BBC World Service provides services by direct broadcasting and re-transmission contracts by radio, television and online. The Corporation's guaranteed income from the licence fee and the World Service grants are supplemented by profits from commercial operations through a wholly owned subsidiary, BBC Worldwide Ltd.

According to BBC's 2012-13 Annual Report, its total income was £5,102.3 million. Of this, nearly 71% came from license fees collected from householders; 22% from BBC's commercial business and 6% came from Government grants.

The licence fee has, however, attracted criticism. It is argued that in an age of multi stream, multi-channel availability, an obligation to pay a licence fee is no longer appropriate.

Presently, BBC operates flagship television channels, radio stations in English and many other languages, news service with largest network, the most popular online internet service, etc.

Although BBC is a public service broadcaster, created under the Royal Charter, they have full independence to produce and broadcast their programmes. They provide the most efficient service to its listeners. Even the private broadcasters consider

BBC as the benchmark to evaluate their own efficiency. Will AIR and Doordarshan, Public Service broadcasters of India learn to be independent and more efficient like BBC?

BBC official website **<http://www.bbc.co.uk>**

By K. Srinivasan, Editor in Chief, PreSense
Source: November 2013 issue of Ezine PreSense

Mahatma Gandhi's Dandi Yatra That Shook the Foundations of the British Raj

Dandi March from Sabarmati Ashram



On 12th March 1930, Mahatma Gandhi set out on foot from his Sabarmati Ashram, along with 78 *satyagrahis* for the coastal village of Dandi, Gujarat. This Dandi March is an important part of the Indian independence movement. It was a direct action campaign of tax resistance and non-violent protest against the British salt

monopoly in colonial India, and triggered the wider Civil Disobedience Movement. This was the most significant, organised challenge to British authority since the Non-cooperation Movement of 1920–22, and directly followed the Purna Swaraj declaration of independence by the Indian National Congress on 26th January 1930.

Mahatma Gandhi walked for 24 days to cover the distance of 240 mile (390 km) to produce salt without paying the tax. Thousands of *satyagrahis* and leaders like Sarojini Naidu joined him. Every day, more and more people joined the march, until the procession of marchers became at least two miles long.

Massive Support from the People

At Surat, they were greeted by 30,000 people. When they reached Dandi, more than 50,000 joined the procession. Gandhi gave interviews and wrote articles along the way. Foreign journalists made him a household name in Europe and America. The New York Times wrote almost daily about the Salt March, including two front-page articles on 6th April and 7th April.



Towards the end of the march, Gandhi declared, "I want world sympathy in this battle of Right Against Might."

When Mahatma Gandhi broke the salt laws at 6:30 am on 6th April 1930, it sparked large scale acts of civil disobedience against the British Raj salt laws by millions of Indians. The campaign had a significant effect on changing the world and the British attitude towards Indian independence and motivated a large number of Indians to join the fight for the first time.

Picking up Salt and Shaking the Foundation of the British Empire

On 6th April 1930 after a prayer, Gandhi raised a lump of salty mud and declared, "With this, I am shaking the foundations of the British Empire." Salt Satyagraha succeeded in drawing the attention of the world. Millions saw the newsreels showing the march. Time magazine declared Gandhi as its 1930 Man of the Year.

Rajaji Leading the Salt Satyagraha in the South

While Gandhi marched along India's west coast, his close associate C Rajagopalachari (Rajaji), who later became independent India's first Governor-General, did a parallel salt march along the east coast from Tiruchi to Vedaranyam.



Rajaji leading the Salt Satyagraha in South - Photo courtesy The Hindu

On 13th April 1930, Rajaji started from Tiruchi and he was joined by a large number of people at Thanjavur, Kumbakonam and other places till they reached the coastal village of Vedaranyam. Sixteen days later, Rajaji and his followers picked up a handful of salt and

were immediately arrested and sentenced to six months' imprisonment.

This 'Salt Satyagraha' was a turning point in the Indian freedom movement. This galvanised the Indians to fight against the mighty British.

***By K Srinivasan, Editor in Chief, PreSense
Source: March 2013 issue of Ezine PreSense***

Quit India Movement – August 1942

9th August 1942 is one of the important days in the history of the Indian freedom movement.



Mahatma Gandhi, Azad and Kripalani

We share the following interesting information for the knowledge of our young and old generations. This will give some idea about the sacrifice made by our leaders during the freedom struggle.

World War II and the Cripps Mission

In the year 1939, the Second World War started between Britain and Germany. In 1942, the then British Governor involved India, without consulting the Congress leaders. This angered the Congress leaders. In March 1942, the British Government sent a delegation under the leadership of Stafford Cripps in what is popularly known as the Cripps Mission, to negotiate with the Congress leaders and persuade them to agree to join the British side in the war, in turn for a promise of freedom. The leaders did not agree to the proposal, as they wanted to maintain neutrality in the war.

Preparation for Civil Disobedience

On 14th July 1942, the Indian National Congress passed a resolution demanding complete freedom to India from the British. The resolution also stated that if the British did not accept the demand, Congress would start a



Huge crowd at Gowalia Tank Maidan on 9th August 1942

'mass civil disobedience'.

Since Britain was engaged in the peak of World War II, this resolution faced controversy. Sri C Rajagopalachari (Rajaji) opposed the resolution and he quit the Congress. (Rajaji returned to the Congress later) Rajaji warned the Congress that it was not the right time to go for civil disobedience, as the entire world was engaged in World War II. But all other senior leaders accepted the resolution. Some other political parties like the Communists, the Hindu Maha Sabha and the Muslim League, too did not support the call.

"Do or die" Call in the Historic Session on 7th August 1942

The historic session of the Indian National Congress was held on 7th August 1942 at the Gowalia Tank Maidan, Bombay (now known as the August Kranti Maidan in Mumbai). In the midnight of 8th-9th August 1942, the Congress passed the famous 'Quit India Resolution', which electrified the country. This has become the popular 'Quit India Movement', and the mass civil disobedience movement was launched with Mahatma Gandhi's "do or die" call.

Quit India Movement Turning Violent

Within a few hours of the resolution and call, all the national leaders were arrested. Since there were no leaders outside, the movement became violent. The people burnt the Government offices and violence could not be controlled by the Congress.

The British Government moved in the army and more than one hundred thousand people were arrested. During this period, the contact of the leaders with the masses was cut off. During this period, Mahatma Gandhi's wife, Kasturba Gandhi and his trusted secretary,



**Aga Khan Palace near Poona where
Mahatma Gandhi was imprisoned from Aug
42 to May 44**

Mahadev Desai were also put into jail. Mahatma suffered failing health.

Different reasons were attributed for 'violence' like the absence of the top leaders, mistaken interpretation of the 'do or die' call, inducement by the British rulers indirectly etc. That was why Rajaji forewarned Mahatma Gandhi and the Congress not to announce the 'civil disobedience' policy. His fear proved right.

Hoisting of the Indian Tri-Colour

When the Quit India movement was started on 9th August 1942, the British Police treated the masses brutally. At that time, Aruna Asaf Ali proudly hoisted the Indian tri-colour in the Gowalia Tank Maidan. This was the first time the Indian tri-colour was hoisted.

Underground Radio Station

During the movement, Aruna Asaf Ali and Usha Mehta (a student) broadcasted news from an underground radio station (42.34 metres). They were shifting the broadcasting equipment frequently to avoid being captured by the British Police.

All the leaders and freedom fighters who participated in the movement were released only after three years, after the World War II ended.

Freedom to India

After World War II, the Labour Party won the elections and captured power in Britain. They took the initiative to transfer power to the interim Government headed by Pandit Nehru. India attained full independence on 15th August 1947.

Though the Quit India movement generated controversies at that time, this movement is considered one of the important milestones in the Indian freedom movement to force Britain to hand over power to the Indian leaders.

Let us salute those brave freedom fighters for their great sacrifice.

By K Srinivasan, Editor in Chief
Source: August 2013 issue of Ezine PreSense

World War II (1st Sep 1939 to 2nd Sep 1945)

Beginning of World War II

Nationalistic tensions, unresolved issues, resentments resulting from the World War I, the inter-war period in Europe and the effects of the Great Depression in the 1930s were the main reasons for World War II.

The culmination of events like invasion of the Republic of China by the Empire of Japan in 1937 and invasion of Poland by Germany and Soviet Russia in 1939 led to the outbreak of World War II. These military aggressions were the result of decisions made by the authoritarian ruling Nazi elite in Germany and by the leadership of the Kwantung Army in Japan. World War II started after these aggressive actions were met with an official declaration of war and/or armed resistance.



German battleship Schleswig-Holstein during a shellfire of Gdynia (Poland) on 1st sep 1939.

On 1st September 1939, Germany invaded western Poland. In response, Britain and France declared war on Germany on 3rd September. On 17th September 1939, Soviet forces invaded Eastern Poland. These invasions marked the beginning of World War II.

Impact of World War II

Major countries in the world grouped themselves into two major forces (a) allies and (b) axis to fight against each other. The World War II lasted 6 years and 1 day. The battle was fought in 9 different locations across the world.

Soviet Union, USA, UK, China, France, Poland, Canada, Australia, New Zealand, South Africa and Yugoslavia



Mussolini and Adolf Hitler

formed the 'Allied Powers'. Joseph Stalin, Roosevelt, Winston Churchill and Chiang Kai Shek were leading the Allied forces. Germany, Japan, Italy, Hungary, Romania and Bulgaria formed the 'Axis Powers'. Adolf Hitler, Mussolini and Hirohito were leading the Axis Powers.

The two groups involved nearly 100 million military personnel in this world war, resulting in the death of nearly 24 million soldiers. 50 to 55 million civilians lost their lives. In total, nearly 80 million people lost their lives during this World War II and this comprised nearly 4% of the then world population.

Adolf Hitler's Atrocities

Hitler began a military build-up on Germany's western border, and in April 1940, German forces invaded Denmark and Norway. On 9th April, Hitler proclaimed the birth of the "Greater Germanic Reich" to his associates; this was his vision of a united empire of the Germanic nations of Europe, where the Dutch, Flemish, Scandinavians, and other people would join to form a single, racially-pure polity under German leadership. In May 1940, Hitler's forces attacked France and conquered Luxembourg, the Netherlands, and Belgium. These victories prompted Mussolini to have Italy join forces with Hitler on 10th June 1940. France surrendered on 22nd June 1940.

Hitler's forces committed numerous atrocities during the war, including the systematic killing (known as 'Holocaust') of around 17 million civilians, including the genocide of an estimated six million Jews. Many victims of the Holocaust were gassed to death, while others died of starvation or disease while working as slave labourers. Hitler eliminated nearly 80% of the Jewish population in the Nazi Germany in hundreds of 'concentration camps'.



Horror Chamber at Buchenwald Concentration Camp

Japan Attacking Pearl Harbour – Another Turning Point

On 7th December 1941, Japan attacked Pearl Harbour, Hawaii. Four days later, Hitler's formal declaration of war against the United States engaged Germany in a war against a coalition that included the world's largest empire (the British Empire), the world's greatest industrial and financial power (the United States) and the world's largest army (the Soviet Union).

Participation by Indian Soldiers – Mahatma and Netaji

Since India was under the British regime, the British Government involved India in the war without consulting the Indian leaders. Nearly 2.5 million soldiers were fighting alongside the British soldiers. Mahatma Gandhi ridiculed the Britain's opposition to Nazism and fascism as hypocrisy since Britain was violating human rights in India.

Meanwhile, Netaji Subash Chandra Bose reorganised the 'Indian National Army' (INA) in alliance with Japan to fight against the British troops. Nearly 40,000 Indian soldiers captured by Japan as 'Prisoners of War' (POW) joined INA and fought against Britain. They gave a tough fight to the British Army in the battle field.

Fall of Hitler and Mussolini

In late 1942, German forces were defeated in the second battle of El Alamein, thwarting Hitler's plans to seize the Suez Canal and the Middle East. In February 1943, the Battle of Stalingrad ended with the destruction of the German Sixth Army. Thereafter came a decisive defeat at the Battle of Kursk. Hitler's military judgment became increasingly erratic, and Germany's military and economic position deteriorated along with Hitler's health. It was also believed that Hitler might have suffered from Parkinson's disease.



Within three years, Germany and the Axis powers occupied most of Europe and large parts of Africa, East and Southeast Asia and the Pacific Ocean. However, the Allies gained the upper hand from 1942 onwards and in 1945 Allied armies invaded Germany from all sides. On 29th April 1945, Mussolini was assassinated. On 30th April 1945, Hitler shot himself.

Surrender by Germany and Japan – End of World War II

The war in Europe ended when Nazi Germany signed its Instrument of Surrender on 8th May 1945, but the Pacific War continued. Together with the United Kingdom and the Republic of China, the United States called for the surrender of Japan in the Potsdam Declaration on 26th July 1945, threatening Japan with "prompt and utter destruction". The Japanese government ignored this ultimatum, and the United States deployed two nuclear weapons developed by the Manhattan Project. American airmen dropped Little Boy on the city of Hiroshima on 6th August 1945, followed by Fat Man over Nagasaki on 9th August. Nearly 250,000 people died.

The atomic bombings of the cities of Hiroshima and Nagasaki in Japan were conducted by the United States during the final stages of World War II in 1945. These two events represent the only use of nuclear weapons in war to date.



Japan Foreign Minister and Chief of Army Staff
on board USS Missouri during surrender
ceremony on 2nd Sep 1945

On 15th August 1945, six days after the bombing of Nagasaki, Japan announced its surrender to the Allies, signing the Instrument of Surrender on 2nd September 1945, officially ending World War II.

Post War Impact

The victory of the Allies over the Axis in 1945 ended the conflict. World War II altered the political alignment and the social structure of the world. The United Nations (UN) was established

to foster international co-operation and prevent future conflicts. The great powers that were the victors of the war — the United States, the Soviet Union, China, the United Kingdom, and France—became permanent members of the United Nations Security Council. The Soviet Union and the United States emerged as rival superpowers, setting the stage for the Cold War, which lasted 46 years.

By K Srinivasan, Editor in Chief
Source: September 2012 issue of Ezine PreSense

Where was Mahatma Gandhi on Independence Day?

India celebrated her Independence Day on 15th August 2012. In our ezine, every month, we trace back the historical event relating to that month. In this issue, we take our readers back to 1947 when the nation was celebrating the Independence Day. During the celebrations at Delhi, when Prime Minister Pandit Jawaharlal Nehru was unfurling the Indian Flag at the Red Fort, Mahatma Gandhi was on a fast and prayer at Calcutta. We trace back the historical event.

Communal Clash at Calcutta in 1946

During the Quit India Movement in August 1942, more than one lakh leaders were arrested. When all the leaders were in prison, Muhammad Ali Jinnah brought a two-nation theory and demanded partition into India and Pakistan. After Mahatma Gandhi came out of the prison, he wanted to stop the move for partition. Muhammad Ali Jinnah declared a 'Direct Action Day' on 16th August 1946 demanding the partition. This resulted in communal clashes across the nation. In Calcutta alone, more than five thousand people were killed and more than fifteen thousand people injured.



At that time, Mahatma went to Calcutta to get the Hindus and Muslims together. When he was at Calcutta, violence broke in Bihar, killing more than 4500 people.

Mahatma's Fast on 15th August 1947

Mahatma Gandhi declared that he would go on a fast to end his life, if the communal clashes were not stopped. Although his

appeal brought calm where he was, rioting continued in other places.



Mahatma Gandhi reluctantly agreed for partition and the British Government handed over powers to the Indian leaders, with Pandit Jawaharlal Nehru as Prime Minister. The entire country was celebrating the Independence Day on 15th August 1947.

But Mahatma Gandhi was in Calcutta fasting on that day and spending his time in prayers, and spinning. He also met groups of people, as usual. The previous day (14th August 1947), while speaking at the Marwari Club, Mahatma had said

that although India would be free from slavery under the British from midnight, India would be cut into two pieces. That reflected his mood that day. He was not happy that India was being "portioned out".

The partition of India and the communal clashes affected him.

On that day of Independence, when a group of students met him, he said, "I am not lifted off my feet by these demonstrations of joy."

Fasting Again in Sep 1947 Without Even Taking Water

Since communal clashes continued in Calcutta, Mahatma Gandhi began his fast again from 1st Sep 1947.

Normally during his fast, he used to take water with salt. Rajaji, then Governor General of India came to Mahatma's place at Calcutta



and tried to persuade him to end the fast, which was causing concern to all. Mahatma Gandhi said that he left everything at the 'disposal' of God. Since Rajaji was a close associate of Mahatma, and was his advisor on many key issues, Rajaji jovially asked him, "If you have left yourself at the disposal of God, then why are you taking water with salt". Mahatma Gandhi immediately stopped taking salted water too during the fast.

After the assurance of Hindu and Muslim leaders that they would remain peaceful, he ended his fast on 4th Sep 1947. He did not drink the salted water till the day he ended his fast.

*(Based on input from Mr Annamalai,
Director, Gandhi Study Centre, Chennai, and other sources)*

***By K Srinivasan, Editor in Chief, PreSense
Source: August 2012 issue of Ezine PreSense***

Gen. K M Cariappa, India's First Army General – Some Inspiring Facts

After gaining Indian Independence, a meeting was organised to select the first General of the Indian Army. Pandit Jawaharlal Nehru chaired that meeting. Leaders and army officers were discussing about whom this responsibility should be given to. During the discussion Nehru said, "I think we should appoint a British officer as the General of the Indian Army as we don't have enough experience to lead the same." Everybody supported Nehru because if the PM was suggesting something, how could they not agree?



Jawaharlal Nehru and K M Cariappa

But one of the army officers abruptly said, "I have a point, sir."

Nehru said, "Yes, gentleman. You are free to speak."

He said, "You see, sir, we don't have enough experience to lead a nation too, so shouldn't we appoint a British person as first PM of India?" The meeting hall suddenly went quiet.

Then, Nehru said, "Are you ready to be the first General of Indian Army?"

He got a golden chance to accept the offer but he refused the same and said, "Sir, we have a very talented army officer, my senior, Lt Gen Cariappa, who is the most deserving among us."

The army officer who raised his voice against the PM was Lt General Nathu Singh Rathore, the First Lt General of the Indian Army.

On being appointed as the first Commander-in-Chief of the independent Indian Army on 15th January 1949, Gen. Cariappa

was instrumental in the integration of troops and turning an imperial army into a national army.

During the 1965 war, when his son, an Indian Air Force pilot, flew an aircraft, the plane was shot down by Pakistan. He was captured and imprisoned as a Prisoner of War (POW). When Ayub Khan learned about this, he informed Cariappa that he would not be kept in a POW Camp like other Indian POWs, since they had worked together before independence. But Cariappa politely declined the offer, saying every soldier in the Indian Army was his son, so he could not request special privileges for only one.

As a token of gratitude by the nation for the exemplary service rendered by him, the Government of India conferred on Gen Cariappa the rank of Field Marshal in 1983. On 15th May 1993, Field Marshal K M Cariappa died in Bangalore, when he was 94. Let us all salute this great Indian Soldier.

Photo courtesy: The Hindu
Source: May 2012 issue of Ezine PreSense

The Making of the Indian Constitution

on 26th January 2013, India celebrated the 64th Republic Day with joy and gaiety. While conveying the greetings to all the readers, we thought of sharing some interesting facts about the significance of this day for the benefit of our young readers.

The British Rule



The first Britishers entered India in 1579. Thereafter, merchants started coming in and soon began to rule us. In 1765, the authority was formally transferred to the East India Company. Then the British Parliament took over the administration. Indians

started protesting the foreign rule even from the 18th century. The Indian National Congress was formed in 1885 to formally fight the foreign rulers. After the entry of Mahatma Gandhi, the freedom movement became dynamic. Before Independence, India was governed by various Acts enacted by the British Parliament. The Government of India Act 1858, the Government of India Act 1909, the Government of India Act 1919 and finally the Government of India Act 1935 framed by the British Parliament governed Indians. (These Acts became irrelevant after Independence and the adoption of the Indian Constitution)

Constituent Assembly Formed

After a prolonged struggle and negotiations, as a fore-runner of Independence, a 'Constituent Assembly' was formed with members, representing different regions and religions. The first meeting of the Constituent Assembly was held on 9th December 1946. Many great leaders were part of this Assembly. On the first day, 207 members participated.

On the first day, Acharya Kriplani, one of the respected leaders, started the proceedings invoking the 'divine blessings' and proposing the name of Shri Sachchidananda Sinha (Bihar), the eldest member of the Assembly as the 'Provisional Chairman' till the Chairman was elected.

Shri C. Rajagopalachari (Rajaji) was the first member to present the credentials and sign the register to become a member of the Constituent Assembly.

On the third day, Dr Rajendra Prasad was elected Chairman of the Constituent Assembly. The designation 'Chairman' was subsequently replaced with 'President of the Constituent Assembly'.

India attained freedom and independence on 15th August 1947 and this Constituent Assembly took over the Governance of India from the British Parliament. Lord Mountbatten was requested by the Constituent Assembly to continue as Governor General for some time. Shri C. Rajagopalachari (Rajaji) took over as the Governor General on 21st June 1948 and he continued till 26th January 1950. Rajaji was the first Indian Governor General of India. After 26th January 1950, the post of Governor General was made President of India. Dr Rajendra Prasad became the first President of India.



Framing the Draft of the Constitution for India

After independence, the Constituent Assembly wanted to frame the Constitution for India. They constituted a 'Committee to draft the constitution' on 29th August 1947 under the Chairmanship of Dr B R Ambedkar. Shri Alladi



Jawaharlal Nehru moving the resolution for and Independent Sovereign Republic in Constituent Assembly

Krishnaswamy Ayyar, Shri N Gopalaswami Ayyangar, Shri K M Mushi, Shri Saiyid Mohd Saadulla, Shri B L Mitter and Shri D P Khaitan were included as members of this Committee.

These eminent people drafted the Indian Constitution and presented to the Constituent Assembly on 4th November 1947.

Discussion in the Constituent Assembly

The Constituent Assembly discussed the Draft Constitution in detail in 114 sittings, spread over 2 years, 11 months and 17 days. The final Constitution was adopted by the Constituent Assembly on 26th November 1949. This day is also known as National Law Day.

Constitution Document Signed

On 24th January 1950, 284 members of the Constituent Assembly signed the document and presented the official Constitution to the nation. Two hand-written copies of our Constitution (one in English and the other in Hindi), and one print copy of English Version were signed by the members.



Rajaji declaring India as a Republic

After putting their signatures, all the members including Dr Rajendra Prasad (President of India Elect) sang 'Vandemataram' and 'Jana Gana Mana' in a chorus, symbolising a great achievement of the Sovereign Independent Republic of India, after a struggle of nearly three centuries.

The proceedings of the Constituent Assembly can be read in the link

<http://164.100.47.132/lssnew/constituent/vol12p1.html>

This Constitution came into force on 26th January 1950. From that day, India is a Sovereign Independent Republic.

When the new Constitution was signed by the members on 24th January 1950, it was drizzling outside the Parliament at Delhi. It was considered a good omen by them.

This Constituent Assembly was made a 'Provisional Indian Parliament' from 26th January 1950. The first General Election was held in 1952 and the 1st Lok Sabha was constituted.

Indian Constitution - Some interesting facts

The Indian Constitution, drafted by great visionaries, continues to be one of the best constitutions in the world. Many global legal experts have praised our constitution. The Indian Constitution contains 22 parts, 395 articles, 12 schedules and 2 appendices. Over a period of 64 years, the Constitution has undergone 97 amendments.

We are publishing these details for the benefit of the younger generation. The freedom and sovereignty we enjoy did not come in a single day. Our elders have struggled and lost their lives in the freedom movement spread over nearly 300 years. The great visionary leaders have also provided us a great Constitution. None of these leaders, who had signed the constitution is alive today.

It is the responsibility of every one of us to salute our great leaders and freedom fighters on this day and live upto their vision.

By K Srinivasan, Editor in Chief
Source: January 2013 issue of Ezine PreSense

India-Pakistan War 1947

When India and Pakistan were given independence in August 1947, the British Government gave the choice to the Princely States existing then in the Indian sub-continent, to join either

India or Pakistan. With the efforts of Sardar Vallabhai Patel, the then Home Minister, who was also known as the 'Iron Man of India', 566 Princely states (excepting 3 states) chose India.



Dr Karan Singh, a well known leader currently). The state, with a majority of Muslims, was ruled by a Hindu King. The state consisted of Jammu, Kashmir and Ladak. While the Kashmir Valley had a majority Muslim population, the people in Jammu and Ladak were mainly Hindus, Sikhs and Buddhists. As he was under pressure from both India and Pakistan to accede to their Governments, he postponed his decision.

Pakistan Invading India

Meanwhile, in October 1947, Pakistan organised a clandestine invasion of the State by a force of Pathan tribesmen, ex-servicemen and soldiers 'on leave'. They broke out in Pooch in Southwest of Kashmir. The Pakistan army gave them full support and back-up as they wanted to capture Kashmir within a week. Maharaja's army could not withstand this sudden invasion.



Maharaja Hari Singh

Kashmir accedes to India

In the afternoon of 26th October 1947, Maharaja Hari Singh (photo) offered to accede to India and this was accepted by the then Governor General Lord Mountbatten the following day. Within a few hours, the Indian Army was sent to Kashmir Valley to drive out the invading tribal people and Pakistan army men.

Indian Army Fighting Back Pakistan

At that time, the Indian Army was under the control of the British officers and they had some technical problems in entering Kashmir to fight against the Pakistan army. The Indian Army under the leadership of Major S K Singh (who later became the Governor of J & K State) entered Kashmir Theatre of war. In spite of bad weather, they managed to airlift the army men in 800 Dakota sorties from Delhi to Srinagar within a short time. `Lord Mountbatten recorded: "In my long experience of war, I have not come across another such massive airlift carried out so successfully."

Sudden Orders to Cease Fire



The Indian Army succeeded in chasing out the invaders. Had they continued for another week or a little more, they would have flushed them out completely. Meanwhile, the Indian Army got the orders to cease fire and to halt the advance to Muzaffarabad. The British Commander, Russell was surprised by the orders. He felt they were losing a golden opportunity. He was of the view that the Indian forces should advance to Muzaffarabad and seal the border by securing the two bridges at Kohala and Domel. Sealing the entry points into Kashmir, he opined, would also relieve the pressure on the besieged forces in Poonch.

The then Prime Minister Pandit Jawaharlal Nehru took up the matter with the UN Security Council and under Resolution 47 of UN, ordered Pakistan to withdraw the troops for a free and fair 'plebiscite' in Jammu & Kashmir region. Although Pakistan did not withdraw their troops from the J & K Region, the cease fire came into force from 1st January 1949.

Was India's Move an Historical Blunder?

Because of this, Pakistan occupied nearly 35% of the J & K Region ruled by Maharaja Hari Singh, who had acceded to India. This portion is still known as 'Pakistan Occupied Kashmir' and problems continue till date.

According to the army officers and the political leaders of that day, taking up the Kashmir issue to UN by Pandit Nehru was a great 'historical blunder'. If the Indian Army had continued the war for another week without declaring a unilateral cease fire, the Indian army would have flushed all the invaders out of the Indian territory, and Kashmir would not have become the grave issue it is today. The Indian Army site even records the event so: (<http://goo.gl/ytupG>)



Source: www.rediff.com - POK : Pak occupied Kashmir
COK: China occupied Kashmir

"Before the remaining areas occupied by Pakistan could be liberated by Indian troops, a cease fire came into effect on 1 January 1949. After bitter fighting lasting 14 months, the UN mediation brought about an uneasy truce."

Since a majority of the Kashmiri people at that time were more keen on joining India, 'plebiscite' immediately after the flushing out invaders would have permanently resolved the Kashmir issue. Instead the then Indian Government took this issue to UN for intervention, and this complicated the issue, and it remains unresolved till date.

By K Srinivasan, Editor in Chief

Source: October 2012 issue of Ezine PreSense

India-China War 1962



On 20th October 2012, the Chinese launched simultaneous offensives in Ladakh and across the McMahon Line. Pandit Jawaharlal Nehru was the Prime Minister then and Mr V K Krishna Menon was the Defence Minister. The war ended when the Chinese declared a ceasefire on 21st November 1962. The border dispute continues till now.

India did not fare well in this war. While China was fighting with 80,000 soldiers, India was fighting with only around 12,000 soldiers. At the end of the war, China occupied around 50,000 sq.km of the Indian territory and the dispute remains unresolved till this date. Kailash and Mansarovar which were once part of India after independence are now in the possession of China.

India lost around 1600 soldiers. Nearly 1400 soldiers were wounded. Around 1700 soldiers were missing. 4000 soldiers were captured by China as 'Prisoners of War' and later released.

Many reasons are attributed to the failure of India in the war. Although Pandit Nehru was the Prime Minister, the political leadership and planning for defence preparedness were reported to be lacking. Even when the Chinese Army was invading India, India was shouting slogans like 'Indi-Chini bhai bhai' (India and China are brothers), without knowing that China was occupying Indian lands.

Many army officers, who were part of the Indian army then, allege that the Indian Army was not equipped with enough weapons and Jawans. Although the Indian army had enough war experience from the World War, they failed due to poor planning and leadership by the political system. In fact, during that time, the Government reported to have reduced the army strength from 2.80 lakh to 1.50 lakh.

The 1962 War taught us several lessons. Some of the important reports like the Henderson Brooks–Bhagat Report on the failure of India, are not made public even after 50 years, for the reason that it might embarrass many of the leaders who were in the Government then.

Let us pay respect and homage to the Jawans who lost their lives in the 1962 War to secure the Indian borders. (Graphic courtesy: Hindustan Times)

By K Srinivasan, Editor in Chief
Source: October 2012 issue of ezine PreSense

Soviet and US in Space Race

On 20th July 1969, history was created by mankind by landing on the moon. Neil Armstrong set his foot from America's Spacecraft Apollo 11 on the moon. Looking back on the history, PreSense focuses on the important events in the space mission.

Space Race during Cold War

Between 1957 and 1975, the Cold War rivalry between the two nations, the Soviet Union (USSR) and the United States (US) focused on attaining firsts in space exploration. These were seen as necessary for national security, and symbolic of technological and ideological superiority. The Space Race involved pioneering efforts to launch artificial satellites, sub-orbital and orbital human spaceflight around the Earth, and piloted voyages to the moon. While the Soviet Union was the first to enter the space, the United States became the first to land man on the moon.

The space race began with the Soviet launch of Sputnik 1 artificial satellite on 4th October 1957, and concluded with the co-operative Apollo-Soyuz Test Project human spaceflight mission in July 1975. The Apollo-Soyuz Test Project came to symbolise détente, a partial easing of strained relations between USSR and USA.

The Space Race had its origins in the missile-based arms race that occurred just after the end of the World War II, when both the Soviet Union and the United States captured advanced German rocket technology and personnel. The Space Race sparked unprecedented increases in spending on education and pure research, which accelerated scientific advancements.

Some of the famous probes and missions include Sputnik 1, Explorer 1, Vostok 1, Mariner 2, Ranger 7, Luna 9, Alouette 1, Apollo 8, and Apollo 11.

Seeding the Space Exploration

In 1952, the International Council of Scientific Unions decided to establish July 1, 1957, to December 31, 1958, as the International Geophysical Year (IGY) because the scientists knew that the cycles of solar activity would be at a high point then. In October 1954, the Council adopted a resolution calling for artificial satellites to be launched during the IGY to map the Earth's surface. In July 1955, the White House

announced plans to launch an Earth-orbiting satellite for the IGY and solicited proposals from various Government research agencies to undertake the development.



Sputnik (USSR)

The Sputnik 1 rocket (picture) was launched at 19:28:34 UTC, on 4th October 1957. The Sputnik satellite, weighing 83kg (183lb) and only twice the size of a football, could be seen with the naked eye as it circled the Earth for 22 days. It emitted a signal that could be heard on a household radio. It took about 98 minutes to orbit the Earth on its elliptical path. The successful launch of Sputnik 1 changed history, by starting the space age and space race between US and USSR.

In addition, the Europeans and the Americans feared that the Soviet Union's ability to launch satellites also translated into their capability to launch ballistic missiles that could carry nuclear weapons from Europe to USA. Then the Soviets struck again. On November 3rd, 1957, Sputnik II was launched, carrying a much heavier payload, including a dog named Laika.



USA's Response by Launching Explorer I

The launch of Sputnik triggered US to grant more funds to compete with USSR. On January 31st, 1958, the United States successfully launched Explorer I. This satellite discovered the magnetic radiation belts around the Earth, and was named after Principal Investigator, James Van Allen.

Launch of NASA by US

The Sputnik launch also led directly to the creation of National Aeronautics and Space Administration (NASA) on 1st October, 1958.



First Person to Orbit the Earth (USSR)

USSR was achieving more success in space mission, ignited by intense rivalry from USA. These included sending the first man, Yuri Gagarin into space, and carrying out the first spacewalk. On April 12th, 1961, the Soviets launched Yuri Gagarin into orbit around the Earth on Vostok 1 spacecraft. Yuri Gagarin was in space for 1 hour and 48 minutes. (See picture)

Historic Speech of Kennedy (US)

In an historic speech on 25th May 1961, President John F Kennedy announced an ambitious space exploration programme in the joint session of the Congress. This included putting a man on the moon before the end of the decade. (picture on right).



First Space Ship to Land on Moon (USSR)

On February 3rd, 1966, Luna 9 spacecraft was the first spacecraft to achieve a soft landing on the moon, or any planetary body other than Earth, and to transmit photographs.

Apollo 11 – Man on the Moon (US)

On 16th July 1969, Apollo 11 with 3 astronauts Neil Armstrong, Michael Collins, and Edwin E. Aldrin Jr, was launched. After entering the lunar orbit, Armstrong and Aldrin were transferred to Lunar Module (LM) named 'Eagle'. Eagle landed on the moon's Sea of Tranquillity at 4:17 pm EDT, 20th July 1969. The first humans on the Moon waited for six hours before they ventured out of their craft. At 10:56:15 pm EDT, Armstrong became the first human to set foot on the Moon.



The first step was witnessed by at least 500 million TV viewers on Earth. His first words when he stepped off the LM's landing pad were, "That's one small step for a man, one giant leap for mankind." Aldrin joined him on the moon's surface almost 20 minutes later. Together, they spent just under two and one-quarter hours outside

their craft. Apollo 11 safely blasted out of the moon's orbit on its way back to a splashdown in the Pacific Ocean on 24th July 1969.

Thus, USA kept up its commitment of landing on the moon before the end of the decade with 161 days to spare and won the race to the moon.

Apollo Soyuz Test Project Ended the Space Race

Marking the end of Cold War between the two super powers, in July 1975, the first Joint US-Soviet space flight US-USSR Apollo Soyuz Test Project (ASTP) was launched.

Astronaut Thomas P. Stafford (in foreground – see picture) and cosmonaut Aleksei A. Leonov



made their historic handshake in space on 17th July, 1975 in Earth orbit. The American and Soviet spacecrafts were joined

together in space for approximately 47 hours on July 17th, 18th, 19th, and 1975.

Watch this podcast on 'Space Race' by USSR and US with rare audio and visual clippings.

<http://www.youtube.com/watch?v=QJVjNKdItJw>

***By Susan Koshy, Editor
Source: July 2012 issue of ezine***

June 1975 – When Indian Democracy Came to a Grinding Halt

Ever since Indian independence, the country has been facing serious challenges from time to time, and every time, it overcame with courage and conviction. India got its freedom from the British in the midnight of 14-15th August 1947. The same freedom and democracy was put to a 'grinding halt' in the midnight of 25-26th



June 1975.

In the midnight of June 25, 1975, President Fakhruddin Ali Ahmed issued a proclamation on the advice of then Prime Minister Mrs Indira Gandhi, as follows:

"In exercise of the powers conferred by clause (1) of Article 352 of the Constitution, I, Fakhruddin Ali Ahmed, President of India, by this Proclamation declare that a grave emergency exists whereby the security of India is threatened by internal disturbances."

By this historic proclamation, the freedom enjoyed by the citizens of India was compromised. Some of the provisions of the Constitution were suspended. Even the judiciary was made powerless. Within a few hours, many of the national leaders like Lok Nayak Jayaprakash Narayan, Morarji Desai, Kripalani, George Fernandes, Chandrasekhar, Vajpayee, L K Advani and Charan Singh were arrested and put behind the bars.

There is nothing much in the records about those 'dark days'. Thus the present generation is deprived of knowing the details of this period of the Indian history. In this edition, we attempt to bring out some of the important aspects of Indian Emergency.

**By K Srinivasan, Editor in Chief, PreSense
Source: June 2012 issue of ezine PreSense**

Circumstances Leading to the Proclamation of Emergency



Indira Gandhi

Immediately after India's victory in the Indo-Pak war which created Bangladesh, the Congress Party led by Indira Gandhi (see photo) won by a massive majority in the 1971 General Elections. During that time, the country was suffering from large scale unemployment, price rise, etc. Sarvodaya leader Lok Nayak Jayaprakash Narayan (popularly known as JP) gave a call for a 'Total Revolution'. People gathered around JP in large

numbers. The opposition parties united under the banner 'Jan Morcha', to fight against Indira Gandhi.

Indira Gandhi and Raj Narain (see photo) fought the Lok Sabha Election from the Rae Bareilly Lok Sabha Constituency in 1971. Indira Gandhi was declared elected. Raj Narain filed an election petition in the Allahabad High Court, alleging that Indira Gandhi committed an election fraud by misusing the Government machinery. Shanthi Bhushan, the noted advocate argued for Raj Narain.



Raj Narain

On 12th June 1975, Allahabad High Court declared Indira Gandhi's victory as null and void and also banned her from contesting elections for six years. This sent shock waves. Even the Supreme Court refused to stay the order of the Allahabad High Court. The same day, the Congress led by Indira Gandhi lost the Assembly Elections and the Jan Morcha alliance captured the power.



Jayaprakash Narayan

The opposition leaders like Jayaprakash Narayan and others demanded the resignation of the Prime Minister. There were protests against Indira Gandhi at that time.

In this backdrop and on the suggestions of Siddhartha Shankar Ray, the then Chief Minister of West Bengal, Indira Gandhi advised the President of India to declare internal emergency in India.

***By K. Srinivasan, Editor in Chief,
Source: June 2012 of ezine PreSense***

Emergency Days – Four Pillars of Democracy Crippled



Nearly 140,000 leaders were arrested during this period. Of this, around 40,000 were from the Sikh community. Some of the senior leaders were even handcuffed (See photo of George Fernandes in a handcuff).

Sycophants surrounded Indira Gandhi. Many excesses were committed. Sterilisations were carried out by force. Huts were removed through police force. Many officers were 'more loyal to the kingdom than the king himself'. Indira Gandhi's son, Sanjay Gandhi was accused of all the excesses. The powers of the Courts were removed. There

was press censorship. Only Doordarshan and All India Radio were broadcasting Government approved news. The print media had to obtain prior approval of their news items, from the Censor Officer of the respective region. Hence, the people were not privy to correct information. Only a handful of newspaper houses showed courage at that time. We have to appreciate the courage shown by The Indian Express and Thuglak (Cho Ramaswamy) at that time, to fight against the emergency.

The Indian Express published a 'blank editorial' as a mark of protest against 'censorship'. Through this 'blank editorial', they conveyed a powerful message to their readers, more than what could have been communicated through a well-written editorial. (Photo)



When the newspapers were asked to compromise to the Government's *dictat*, many of the national papers acceded to it. Historically, the so called 'big brands' of today, were on their knees during the emergency days, to save their skin.



Sanjay and Indira Gandhi

Dr Subramaniam Swamy was a Member of Parliament then. The Government wanted to arrest him. Every time, he used to make a brief appearance in the Parliament and within a few hours, he would re-surface in some foreign country. He gave a tough fight against the emergency.

The Rashtriya Suyam Sevak Sangh (RSS) was banned. Their leaders were arrested. Many of them went underground. They were working against emergency in disguise. Many of the Communist leaders were also arrested.

***By K Srinivasan, Editor in Chief, PreSense
Source: June 2012 issue of ezine PreSense***

End of Emergency – All Records Destroyed

Elections Declared

On 23rd January 1977, Indira Gandhi announced elections to the Lok Sabha. Emergency was lifted on 23rd March 1977, after 21 months. After the declaration of the elections, all the leaders were released from jail.

When the leaders came out, they had neither the money nor the organisational structure. The workers were also in prison. Four major political parties Congress (O), Bharatiya Jan Sangh, Bharatiya Lok Dal and Socialist party merged to form the 'Janata Party'. All of them contested under the same party symbol of 'chakra-haldhar'. (picture)



In the General Elections, Janata Party and its allies swept the polls, winning 330 seats out of 542 in the Lok Sabha. Indira Gandhi could win only 154 seats, that too in the four states of South India. In North India, Indira Gandhi won just 2 seats. Both Indira Gandhi and Sanjay Gandhi were defeated. Indira Gandhi apologised for the emergency excesses and atrocities.

During the emergency days, Indira Gandhi made a constitutional amendment (known as the 42nd amendment) crippling the constitutional powers. But after the Janata Party came into power, they reversed all the amendments, to restore the supremacy of the Constitution. (popularly known as 44th amendment).



Appointment of Shah Commission by Janata Government

Janata Party formed the Government under the Prime Ministership of Morarji Desai. (picture) They appointed a

Commission under the Chairmanship of Justice Shah to enquire into the atrocities and excesses committed during the Emergency period. Justice Shah submitted his report in August 1978.

Unfortunately, the Janata Government could not continue in power for long, due to the internal differences of its leaders. Thereafter, the Janata Party split into various parties, like Janata Dal, BJP, Samajvadi Party, etc. Dr Subramaniam Swamy is the lone leader at present, who remained in the original Janata Party.

Indira Back to Power

Indira Gandhi came back to power in 1980. After her return to power, all the copies of the Shah Commission Report were removed from the libraries, including the Parliament and the national libraries. Not even a single copy of the report was available after that time.

***By K. Srinivasan, Editor in Chief, PreSense
Source: June 2012 issue of ezine PreSense***

Shankar's Weekly – Final Cover 31st August 1975



Shankar's weekly, the most popular cartoon magazine of India, started in 1948 exclusively for cartoons, was forced to shut down in 1975 after the introduction of Press Censorship during the Emergency.

After 27 years of publication, Shankar's Weekly published their last edition on 31st August 1975. The cover page carried

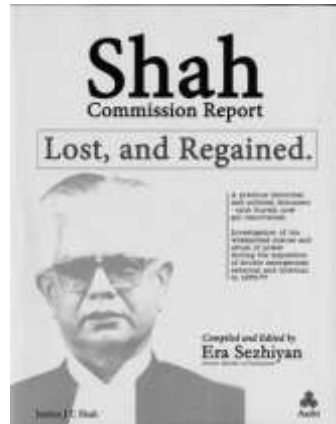
the words, "Parting – Not without sorrow". (Picture)

In the Editorial of the last edition, Shankar Pillai, the Editor wrote, "Dictatorships cannot afford laughter because people may laugh at the dictator and that wouldn't do. In all the years of **Hitler**, there never was a good comedy, not a good cartoon, not a parody, or a spoof. From this point, the world and sadly enough India have become grimmer."

***By K Srinivasan, Editor in Chief, PreSense
Source: June 2012 issue of ezine PreSense***

Shah Commission Report – Lost and Regained

The entire 21 months' dark period in the Indian democracy was buried under. Mr Era Sezhiyan, a well-known Parliamentarian and Member of Parliament during the Emergency period, had one copy of the Shah Commission Report in his library. He is now 90 years old. The report has now been reprinted and published. I took an interview with Mr Sezhiyan about the Shah Commission Report. Please listen to an exclusive interview with Mr Era. Sezhiyan on the Shah Commission Report:
<http://goo.gl/XQNfE>



The interview can also be watched on **YouTube:**
<http://goo.gl/QrPH8>

Forgotten History and Heroes

Martyrs have been forgotten in history. Attempts were made to erase this part of the history too. Because of the ignorance of this great struggle, even Anna Hazare team called his movement the 'second freedom movement'. Calling Anna Hazare's movement the second freedom struggle would amount to belittling the sacrifices made by Lok Nayak Jayaprakash Narayan and the other great leaders. More than 140,000 leaders had spent their time in prison during the Emergency days.

Let us salute to those UnSung Heroes who fought to restore the democracy back to India

By K Srinivasan, Editor in Chief
Source: June 2012 issue of ezine PreSense

Abu Abraham's Popular Cartoon in The Indian Express dated 10.12.1975

Abu Abraham's (A well-known Indian cartoonist) cartoon in the Indian Express showing Fakhruddin Ali Ahmed signing the Emergency declaration from his bathtub. In this cartoon, President Fakhruddin Ali Ahmed tells PM's emissary, "If there are any more ordinances, just ask them to wait". This cartoon is the most popular cartoon published by Indian Express with courage.



Source: June 2012 issue of ezine PreSense

Dissolution of the Mighty Soviet Union – December 1991

The Soviet Flag Lowered for the Last Time

"All the News That's Fit to Print"

The New York Times

Late Edition
New York, Friday, Dec. 26, 1991
Today's Edition: 100 pages, 100 cents
Subscription: \$10.00 per year (12 issues)
Single copy: 10 cents

VOLUME 117, No. 4828 NEW YORK, THURSDAY, DECEMBER 26, 1991

GORBACHEV, LAST SOVIET LEADER, RESIGNS; U.S. RECOGNIZES REPUBLICS' INDEPENDENCE

RETAILERS REPORT SALES FELL SHORT OF DIM FORECASTS

Last Minute Buying Spent Little
to Carry Merchants Ahead
of Last Year's Prompts

By FRANK RUFFALO
Retailers reported that sales of Christmas gifts were lower than expected, but they said they were not discouraged by the results. The retailers said that they had been expecting a strong holiday season, but the results were disappointing. They said that they had been expecting a strong holiday season, but the results were disappointing. They said that they had been expecting a strong holiday season, but the results were disappointing.

As recently as a month ago, many retailers had hoped to break the record set by last year's Christmas. But now, through the end of December, many retailers are reporting that sales are down. The retailers are reporting that sales are down. The retailers are reporting that sales are down. The retailers are reporting that sales are down.

They are disappointed with the results. They are disappointed with the results. They are disappointed with the results. They are disappointed with the results.

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Mikhail S. Gorbachev after announcing his resignation last night as President of the Soviet Union.

The Soviet State, Born of a Dream, Dies

By MICHAEL S. SCHWARTZ
The Soviet Union, the last of the great superpowers, has ended its existence. The Soviet Union, the last of the great superpowers, has ended its existence. The Soviet Union, the last of the great superpowers, has ended its existence. The Soviet Union, the last of the great superpowers, has ended its existence.

Communist Flag Is Removed; Yeltsin Gets Nuclear Controls

By FRANCIS X. CLINE

Moscow, Dec. 25 — Mikhail S. Gorbachev, the last leader of the Soviet Union, has announced his resignation. The Soviet Union, the last of the great superpowers, has ended its existence. The Soviet Union, the last of the great superpowers, has ended its existence. The Soviet Union, the last of the great superpowers, has ended its existence.

Yeltsin, the new president of the Russian Federation, has been given control of the nuclear arsenal. The Soviet Union, the last of the great superpowers, has ended its existence. The Soviet Union, the last of the great superpowers, has ended its existence. The Soviet Union, the last of the great superpowers, has ended its existence.

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When the whole world was celebrating Christmas on 25 December 1991, Soviet President Mikhail Gorbachev resigned, declaring his office extinct, and handed over the Soviet nuclear missile launching codes to the Russian President Boris Yeltsin. This marked the dissolution of the Union of Soviet Socialist Republics (USSR), a massive communist empire that had existed since 1922.

That same evening at 7:32 P.M. the Soviet flag was lowered from the Kremlin for the last time and replaced by the Russian tri-colour. The dissolution of the state also marked an end to the Cold War. The Union of Soviet Socialist Republics (USSR) formally ceased to exist on 26 December 1991. On this day, the dissolution of the Soviet Union was finalized by declaration no. 142-H of the Soviet of the

Republics of the Supreme Soviet of the Soviet Union, acknowledging the independence of the twelve republics of the Soviet Union that created the Commonwealth of Independent States.

Mikhail Gorbachev

The USSR had been in a long economic stagnation when Gorbachev came to power in 1985. In order to bring about change, he introduced several reforms, including perestroika (economic restructuring) and glasnost (openness). Glasnost opened the floodgates of protest and many republics made moves toward independence, threatening the continued existence of the USSR.

On February 7, 1990, the Central Committee of the Communist Party of the Soviet Union (CPSU) accepted the recommendation of Mikhail Gorbachev that the party give up its 70-year-long monopoly of political power.

During 1990 all fifteen constituent republics of the USSR held their first competitive elections. Reformers and ethnic nationalists won many of the seats. The CPSU lost the elections in six republics.

In August 1991, a group of Communist Party hardliners, frustrated over the separatist movement, attempted to stage a coup. It failed due to a massive show of civil resistance. This attempt destabilised the Government further.

Commonwealth of Independent States (CIS)

Representatives from 11 Soviet republics (Ukraine, the Russian Federation, Belarus, Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan, Moldova, Turkmenistan, Tajikistan and Uzbekistan) met in the Kazakh city of Alma-Ata and announced that they would no longer be part of the Soviet Union. Instead, they declared they would establish a Commonwealth of Independent States (CIS). The three Baltic republics (Latvia, Lithuania and Estonia) had already

declared their independence from the USSR. Georgia joined CIS in 1993 and withdrew in 2008.

Cause for Soviet Collapse



Post-Soviet states in alphabetical order: 1. Armenia, 2. Azerbaijan, 3. Belarus, 4.

Estonia, 5. Georgia, 6. Kazakhstan, 7. Kyrgyzstan, 8. Latvia, 9. Lithuania, 10.

Moldova, 11. Russia, 12. Tajikistan, 13. Turkmenistan, 14. Ukraine, 15. Uzbekistan

Stagnating economy, unwanted army involvement in Afghanistan, economic reforms Perestroika, decentralisation with more autonomy to republics, transparency and openness (Glasnost), cover up of nuclear power plant accident at Chernobyl, growing nationalism in the individual republics due to the political blunders of the Communist leaders, lack of economic incentives to encourage innovation and productivity, excessive focus on military power due to keeping pace with massive US military build-up, reduced motivation and fear against the American threat, Importance given to Russia over other states were the major causes for Soviet disintegration.

***By K Srinivasan, Editor in Chief, PreSense
Source: December 2013 issue of ezine PreSense***

September 11 Attack on World Trade Centre

On 11th September 2001, Al-Qaeda, a terrorist group launched a series of four coordinated attacks in New York City, Washington, D.C. and the metropolitan areas in the United States.

Attack on World Trade Centre and Pentagon



Four passenger airliners were hijacked by 19 Al-Qaeda terrorists for the suicide attacks. Two of the planes, the American Airlines Flight 11 and the United Airlines Flight 175 were crashed into the North and South Towers respectively, of the World Trade Centre complex in New York City. Within two hours, both the towers collapsed. The debris and the resultant fire and heat caused the partial or complete collapse of other buildings in the WTC complex. Major damage was also caused to ten other large surrounding structures.

A third plane, the American Airlines Flight 77, crashed into the Pentagon (the headquarters of the United States Department of Defence), leading to a partial collapse in its western side.

The fourth plane, the United Airlines Flight 93, was targeted at Washington, D.C, but crashed into a field near Shanksville, Pennsylvania after its passengers tried to overtake the hijackers.

Death Toll

In total, around 3,000 people, including 227 civilians and 19 hijackers aboard the four planes, died in the attacks. This

included citizens from over 90 countries. It was the deadliest incident for the fire-fighters in the history of the United States.

Along with the 110-floor Twin Towers, numerous other buildings at the World Trade Centre site were destroyed or badly damaged.

Al-Qaeda Claiming Responsibility

Suspicion quickly fell on Al-Qaeda. Although the group's leader, Osama bin Laden, initially denied any involvement, in 2004, he claimed responsibility for the attacks. Al-Qaeda and bin Laden cited U.S. support of Israel, the presence of U.S. troops in Saudi Arabia, and sanctions against Iraq as motives for the attacks.



US launched War Against Terror



Osama Bin Laden

The United States responded to the attacks by launching the War on Terror and invading Afghanistan to depose the Taliban, who had harboured the Al-Qaeda. Many countries strengthened their anti-terrorism legislation and enhanced their law enforcement powers. After evading capture for several

years, bin Laden was finally located and killed by the U.S.

forces in May 2011.

Post 9/11 - Recovery

The destruction of the Twin Towers and the other buildings had caused serious damage to the economy of Lower Manhattan. This had a significant effect on the global markets, closing Wall Street until September 17 and the civilian airspace in the U.S. and Canada until September 13. Many closings, evacuations, and cancellations followed the attack, either out of fear of further attacks or respect for the affected.

Clean-up of the World Trade Centre site was completed in May 2002, and the Pentagon was repaired within a year. Numerous memorials have been constructed, including the National September 11 Memorial & Museum in New York, the Pentagon Memorial, and the Flight 93 National Memorial in Pennsylvania.

On November 18, 2006, construction of One World Trade Centre began at the World Trade Centre site. As of September 2013, the new tower's concrete construction is largely completed and is likely to be opened in late 2013 or early 2014. The fact remains that 9/11 had unquestionably changed everyone's lives and the course of history in the world.

Source: September 2013 issue of ezine PreSense

Terrorist Attack on Indian Parliament – 13th December 2001

Indian Parliament Attacked

On December 13, 2001, the Indian Parliament was in its winter session. At 11.30 in the morning, five armed terrorists belonging to Pakistan-supported Lashkar-e-Toiba and Jaish-e-Mohammed terrorist groups, drove through the gates of the Parliament House in a white Ambassador car, fitted with an Improvised explosive device.

When they were challenged, they jumped out of the car and opened fire. In the gun battle that followed, all the attackers were killed. Eight security personnel and a gardener were killed too. 22 people were injured.



The police said that the dead terrorists had enough explosives to blow up the Parliament building, and enough ammunition to take on a whole battalion of soldiers. Unlike

most terrorists, these five left behind a thick trail of evidences — weapons, mobile phones, phone numbers, ID cards, photographs, packets of dry fruit, and even a love letter. There were about 100 Members of Parliament in the building at the time, and none was hurt.

Prime Minister's TV Speech

The then Prime Minister, Atal Behari Vajpayee, made a televised address to the nation shortly after the attacks, and was quick to denounce



the militants.

"This was not just an attack on the building. It was a warning to the entire nation." he said. "We accept the challenge."

Investigations and Arrest

On Dec 14 and 15, investigating agencies, together with the Special Cell of the Delhi Police, captured four people under the Prevention of Terrorism Act (POTA) that was in force then. They were Afsal Guru, SAR Geelani, a Delhi University professor, Navjot, also known as Afsan, and her husband, Shaukat Hussain Guru.

Geelani and Afsan were let off and Shaukat Hussain Guru's death sentence was reduced to 10 years' imprisonment. He is now out of jail.

Death sentence to Afzal Guru

Afzal Guru was sentenced to death on Dec 18, 2002 by a trial court, which the Delhi High Court upheld on Oct 29, 2003. His appeal was rejected by the Supreme Court on Aug 4, 2005. His mercy plea is pending with the President. The Government is yet to take a decision on the mercy petition.

Government Delaying the Execution

After the hanging of Ajmal Kasab, who was involved in the Mumbai attack, a large section of the Indian population is now demanding the hanging of Afzal Guru, who was the mastermind behind this Parliament attack. The Human Rights' organisations have been protesting against the hanging of Afzal Guru. For fear of Muslim backlash in Kashmir and elsewhere, the Government of India is holding the decision without hanging him.

The citizens desire that there should not be any mercy on terrorists and that all terrorists should be treated as terrorists, irrespective of their caste,



creed or religion, because terrorism is beyond all religions and beliefs.

(Afzal Guru was since hanged on 10th Feb 2013)

By K Srinivasan, Editor in Chief, PreSense
Source: December 2012 issue of ezine PreSense

Mumbai Attack on 26th November 2008 – Remembering Heroes

In November 2008, Pakistan supported Lashkar-e-Taiba sent some terrorists to Mumbai to attack and to create instability in India. On 26th November 2008, these terrorists entered Mumbai through the sea and started their attacks in 8 places commencing from the Chatrapathi Shivaji Railway Terminus. Simultaneously, they attacked the Taj Hotel and the Nariman House, where the Jewish community people lived. 168 innocent people lost their lives. More than 300 people were injured. 19 police and other officials lost their lives in their bid to save the public and the nation.



The Rapid Action Force personnel and Marine Commandos (MARCOS) and the National Security Guards (NSG) commandos did an excellent job to save the lives of the people and to kill the terrorists. 10 Terrorists were shot dead by the commandos. One terrorist by the name, Ajmal Kasab was caught alive. After due judicial process, he was hanged on 21st November 2012 at Pune.

Source: November 2012 issue of ezine PreSense

Rajaji – Mahatma Gandhi's Conscience Keeper, History's Forgotten Hero – Part I (Pre-Independence)

The Indian freedom movement produced many patriotic leaders from all parts of the nation. However, barring a few leaders like Mahatma Gandhi, Pandit Nehru and Sardar Patel, the others are not so well-known to the present generation. Chakravarti Rajagopalachari (10th December 1878 – 25th December 1972), popularly known as 'Rajaji' and also as 'CR' is one of those great leaders India has produced. He was supportive behind every movement organised by Mahatma Gandhi.

First Person to Recognise M.K. Gandhi's Potential

After graduating in law, Rajaji began his practice as a criminal lawyer in 1900 at Salem, and even at a young age of 25, he was one of the highest paid lawyers in those days. When M.K. Gandhi (later popularly known as Mahatma Gandhi) was fighting against the South African Government through *Ahimsa* and *Satyagraha*, in 1912, Rajaji distributed pamphlets about Gandhiji's activities. He was probably the first person to recognise Gandhiji's potential for fighting against the British through *Satyagraha*. After Gandhiji returned to India from South Africa, Rajaji was the first leader to support Gandhiji's *Satyagraha* movement in India. Although Pandit Nehru and Sardar Patel had met up with Gandhiji before Rajaji had, they were not impressed with Gandhiji's ideas at their first meeting. They accepted him as their leader only after Rajaji did.

Fight Against Untouchability and Liquor

As the Municipal Chairman of Salem (1917-1919), Rajaji fought against untouchability in spite of strong opposition from the upper caste. He also fought against alcoholism. When he subsequently became the Premier of Madras State (as it was called during those days), he brought about an Act permitting the entry of the Dalit community into temples. He also introduced 'prohibition' (of liquor) in the state. Thirty

years later, when there was a proposal to reintroduce sale of liquor in the state, he pleaded with the then Chief Minister against this move. Liquor was prohibited for a generation till then. His plea was rejected and liquor shops were re-opened



“ Similar to the Sabarmathi Ashram in Gujarat set up by Mahatma Gandhi, Rajaji set up the 'Gandhi Ashram' in 1924 in a village near Tiruchengode and lived in a small hut for 10 years with his children. Both these Ashrams played a significant role in India's freedom movement.

in the state.

Similar to the Sabarmati Ashram in Gujarat set up by Mahatma Gandhi, Rajaji set up the 'Gandhi Ashram' in 1924 in a village near Tiruchengode and lived in a small hut for 10 years with his children. Both these *Ashrams* played a significant role in India's freedom movement. Rajaji was a great follower of Gandhiji. On several occasions, Mahatma Gandhi described Rajaji as his 'conscience keeper' and also his 'political heir'.

Shoulder-to-Shoulder with Mahatma Gandhi

On 6th April 1930, Gandhiji started his *Dandi Salt Satyagraha*.



On 8th April 1930, Gandhiji started his Dandi Salt Satyagraha. On 13th April 1930, Rajaji started his march from Tiruchirapalli to Vedaranyam to collect salt. He was arrested.

On 13th April 1930, Rajaji started his march from Tiruchirapalli to Vedaranyam to collect salt. He was arrested. These two

marches galvanised the entire India.

Visionary Ideas Not Understood

Rajaji was a great visionary. His ideas were always futuristic and he did not worry about the contemporary ideas. Most of the time, his ideas were misunderstood and he was criticised for his revolutionary ideas. It was only on a later date that people realised the worthiness of his ideas. Rajaji had both admirers and critics for his philosophy. Notwithstanding criticisms, he used to express his views freely, keeping in mind the interest of the nation and the people.

In 1942, when the British Government was engaged in World War II, Mahatma Gandhi announced the 'do or die' slogan and the 'Quit India Movement'. Rajaji at that time had advised against venturing into such aggressive movements, as the Government was engaged in war. He also suggested a friendly dialogue with the Muslim League, in preparation for the country's independence after the world war. Mahatma Gandhi and the other leaders rejected his idea and went ahead with Quit India Movement. Rajaji then resigned from the Congress and returned to Madras.

More than one hundred thousand freedom fighters, including senior leaders, were arrested. The *Ahimsa* movement turned out to be a violent event, in the absence of the leaders to guide the people of the movement. The arrested leaders and freedom fighters were released only in 1945 after the war was over. This was a setback for the freedom movement.

Meanwhile, the Muslim League was aggressive in their stand for the partition of India, since there was no Congress leader to engage them in dialogue. It was only then, that the Congress leaders realised that they should have heeded Rajaji's advice. Rajaji returned to the Congress in 1945 at the request of Mahatma Gandhi, to galvanise the freedom movement.

Though there was opposition against partition, Rajaji introduced a formula, popularly known as the 'CR Formula' before independence. Talks were held between the Congress

and the Muslim League, based on the CR Formula. Many Congress leaders later felt that if the Quit India Movement had been abandoned and Rajaji's advice followed, the partition would have been smoother and without bloodshed. At a critical time when India's independence was in the vicinity, all the senior Congress leaders, including Mahatma Gandhi were in the jail.

***By K Srinivasan, Editor in Chief
Source: December 2014 issue of ezine PreSense***

Rajaji – Part II – His Role in the Post-Independent Era

After India's independence, when communal clashes broke out in West Bengal, Rajaji was requested to be the first Governor of West Bengal with effect from 15th August 1947.

He played a major role in curbing the violence. In 1948, he was made the 'Governor General of India' (now renamed the President of India). Rajaji was the last Governor General of India and the only Indian to hold the position. As he was opposed by a section of Congress leaders for his non-participation in the Quit India Movement, he was not made the President of India after 26th Jan 1950. Pandit Nehru requested Rajaji to help him by joining the cabinet in 1950. Rajaji resigned in 1951 after a misunderstanding with Nehru.



President Rajendra Prasad presenting the Bharat Ratna to C. Rajagopalachari on January 27, 1955.

In 1952, a large number of Communist candidates were elected to the Madras State Assembly (Tamil Nadu, Kerala, Andhra and part of Karnataka) and the Congress failed to obtain a majority. This resulted in political instability in the state. Prime Minister Nehru then approached Rajaji to help the Congress by becoming the Chief Minister of Madras State. Rajaji reluctantly took up the position as the Chief Minister of Madras State in 1952.

During his tenure, he brought about strict rules for good governance to function without political interference. He wanted corruption-free governance. He introduced an education policy known as 'The Modified Scheme of Elementary Education', combining vocational courses with the academics, and with reduced academic hours. He wanted to encourage more children to attend school. At that time, less than 48% of children attended primary schools, and more than 50% dropped out after primary school. His critics

opposed his policy as a 'hereditary education policy' and accused Rajaji of supporting casteism.

A committee of eminent educationists known as the 'Parulekar Committee' endorsed his education policy, and proposed that it be extended to all rural areas. President Rajendra Prasad, Prime Minister Nehru and the Central Advisory Board on Education too appreciated and endorsed the policy scheme. Rajaji defended the scheme saying it was necessary to train the students on various vocational courses, to make the country vibrant and progressive.

His political opponents in the Congress party wanted him to withdraw the scheme. Rajaji preferred to resign from the post, rather than withdraw it. He resigned from his position in 1954. Kamaraj, who succeeded him as Chief Minister withdrew the Scheme. Several years later, India realised the need for more vocational and professional education.

Leaving Congress

Rajaji was the first recipient of the 'Bharat Ratna' Award, when it was introduced in 1955. Rajaji resigned from the Congress Party due to differences in opinion between him and its members. He founded the 'Swatantra Party' in 1959.

In 1967, the Swatantra Party became the second largest party with 44 MPs. Rajaji never contested in the national elections in his political career. When the Congress was leaning towards left, he advocated liberalisation of economy

and the removal of the 'License-Quota-Permit Raj'.

Although the Congress did not accept his economic policies at that time, they introduced the very same economic policies later in 1991, after 32 years.



C. Rajagopalachari (second from right) and members of the Gandhi Peace Foundation meeting the then American President John F. Kennedy (centre)

In 1967, he formed the first political alliance in India with 7 parties in Tamil Nadu and defeated the Congress, paving the

way for DMK to come to power. Thus, even the very powerful leader, Kamaraj was defeated in the elections. It is a different story that later in 1971, he formed an alliance with the Congress(O) led by Kamaraj to dethrone DMK, but failed.

Rajaji as an International Leader

Rajaji was against nuclear weapons. In 1955, he appealed to the Government of India to refuse American aid if the country continued with its nuclear tests. This embarrassed Pandit Nehru too. Rajaji wrote a book called "Mankind Protests", opposing nuclear weapons. Mr. Nikita Khrushchev, General Secretary, USSR, got it translated into Russian for wide circulation in his country.

In 1962, Rajaji visited USA, along with the members of Gandhi Peace Foundation delegation, in response to President Kennedy's invitation. This was the only foreign visit Rajaji undertook in his lifetime. He was the only civilian not in office, to be given a red carpet reception at the White House. President Kennedy was impressed by his presentation, and he spent more than one hour with him as against the allotted 25 minutes. Rajaji explained to Kennedy the dangers of embarking on an arms race, even one in which USA could win.

Multi-Faceted Personality

Rajaji was a prolific writer and in 1922, he was the editor of 'Young India'. He was a regular contributor of articles on a variety of subjects, to several magazines including '*Kalki*' and '*Swarajya*' from 1960 till his death. Rajaji authored among others, commentaries on important books like the '*Ramayana*', the '*Mahabharatha*', the '*Thirukkural*' and the '*Bhagavindam*'. These have since been translated into several languages.

Rajaji died on 25th December 1972, after a short illness. It is interesting to know that when Rajaji's parents checked his horoscope at the time of his birth, the astrologer told them

that the baby's future included the fortunes of a king, of an exile, of a guru, and of an outcast. The people would worship him; they would also reject him. He would sit on an emperor's throne; he would also live in a poor man's hut.

Rajaji was respected for his immaculate honesty, his integrity and his selfless dedication for the welfare of the poor.

By K Srinivasan, Editor in Chief
Source: December 2014 issue of ezine PreSense

Babasaheb Dr B R Ambedkar - Another Forgotten Legend in Indian History

With the 125th birth anniversary of Babasaheb Dr Bhimrao Ramji Ambedkar (1891–1956) happening this year, we remember him as yet another legend forgotten in the annals of Indian history. He was the architect of the Indian Constitution, which has stood the test of time, braving various challenges of Indian politics and governance. He was a great philosopher, economist, lawyer, political activist and social reformer.

His Early Days - No Peon, No Water

Bhimrao Ramji Sakpal Ambavadekar (later Dr Bhimrao Ramji Ambedkar) was born to a Maratha family, as the 14th child to his parents. His community was considered 'untouchable' in the society. As a school student, he underwent much humiliation due to this social practice of caste discrimination. It is distressing to read about his personal experience because of 'untouchability' prevailing then.

Quote

While in the school, I knew that children of the touchable classes, when they felt thirsty, could go out to the water tap, open it, and quench their thirst. All that was necessary was the permission of the teacher. But my position was separate. I could not touch the tap; and unless it was opened for it by a touchable

If the peon was not available, I had to go without water. The situation can be summed up in the statement—no peon, no water.

person, it was not possible for me to quench my thirst. In my case the permission of the teacher was not enough. The presence of the school peon was necessary, for he was the only person whom the class teacher could use for such a purpose. If the peon was not available, I had to go without

water. The situation can be summed up in the statement—no peon, no water.

Unquote

Mahadev Ambedkar, his Brahmin teacher was sympathetic towards him and supported him. He changed his original name in the school records from 'Bhimrao Ramji Sakpal Ambavadekar' to 'Bhimrao Ramji Ambedkar', adding his own surname of Ambedkar.

With his father's encouragement, Dr Ambedkar completed his graduation in Bombay. Although he was opposed to '*Manu Smriti*', his writings reveal his deep knowledge of the ancient scriptures, Vedas and the Upanishads. Even in the Constituent Assembly, he favoured Sanskrit as the national language, although it was not accepted by the majority.



Sayajirao Gaekwad III

Support from the Baroda Ruler

Sayajirao Gaekwad III, the ruler of Baroda was a social reformer who supported poor students from the 'depressed class' (untouchables). When he met Bhimrao Ambedkar, he recognised his potential and offered him a scholarship to study abroad. Ambedkar completed his studies, including a doctorate at the Columbia University (USA), and at the London School of Economics (UK). In spite of the caste discriminations and untouchability practices, some good-hearted people like Mahadev Ambedkar and Sayaji Rao III recognised Ambedkar's potential and helped him to move to the higher levels in academics. Ambedkar proved to be an outstanding student wherever he studied.

On his return to India, he served the Baroda ruler for some time. In 1918, he became the Professor of Political Economy at the Sydenham College of Commerce and Economics in Bombay. Even though he was popular with the students, the professors objected to his reformist activities such as sharing the same drinking-water jug that they all used.

Round Table Conference

The British Government invited leaders from different political parties to the Round Table Conferences held in



Dr Ambedkar and Mahatma Gandhi in the Round Table Conference

1930-32, to draft a new Constitution leading to the self-rule by Indians. Dr Ambedkar attended all the three Round Table Conferences. Mahatma Gandhi did not attend the first Conference due to a difference in opinion with Dr Ambedkar. During the First Round Table Conference held in

November 1930, Dr Ambedkar proposed the concept of a 'Separate Electorate' for the

'Depressed Class' (Untouchables). He argued that the problems faced by the untouchables were not social problems but political problems. More than 20% of India's population were from the untouchables category. Dr Ambedkar pleaded that the problems of such a sizeable portion of the population could not be ignored. He wanted a proportionate political power to resolve the issue. He suggested a 'Separate Electorate' for the Depressed Class, meaning thereby that their representatives could be elected only by the untouchables and not by all the others. He even quoted from the Mahabharata that the kings and the ministers therein

were from all communities, (including Sudras, which is equivalent to the socially deprived class).

Since Mahatma Gandhi held a different view, he did not agree with the suggestion. He opposed it in the Second Round Table Conference. He feared that allowing a 'Separate Electorate' might divide the Hindu community further. He believed in a change in the social mindset of the people to eradicate untouchability.

Poona Pact

British Prime Minister, Ramsay MacDonald made an Award in 1932 known as the 'Communal Award', providing 'Separate Electorate for Muslims, Christians, Upper Caste Hindus, Lower Caste Hindus, Sikhs, Buddhists and Depressed Class'. The Depressed Class (Untouchables) could then elect their own representatives to the various provinces under the British rule. This was opposed by Mahatma Gandhi on the ground that it would disintegrate the Hindus. Gandhi was then in Pune Yerwada prison. He went on an indefinite fast from 20th Sep 1932 against the 'Separate Electorate' for Depressed Class. After some lengthy negotiations, Ambedkar and Gandhi reached an agreement on 24th September, 1932 to have a single Hindu electorate, with Untouchables having seats reserved within it. This is called the 'Poona Pact'. The text uses the term "Depressed Classes" to denote Untouchables. It was later called the Scheduled Castes and Scheduled Tribes under the India Act 1935, and then the Indian Constitution of 1950.

Reserve Bank Conceptualised

The Reserve Bank of India was founded on 1st April 1935 to address the economic troubles of the nation after the First World War. RBI was conceptualised as per the guidelines, working style and outlook presented by Dr Ambedkar as written in his book, "The Problem of the Rupee – Its origin and its solution."

Forming Political Party

In 1936, Ambedkar founded the Independent Labour Party, which contested in the 1937 Bombay elections to the Central Legislative Assembly for the 13 reserved and 4 general seats and securing 11 and 3 seats respectively. Right from 1916, Dr Ambedkar began uniting all the untouchables in India. In July 1942, he organised a national conference at Nagpur under the banner of Scheduled Caste Federation (SCF). More than 75,000 scheduled caste people, including 25,000 women participated. In his historic speech, he demanded self respect and freedom. Later, SCF transformed itself into the Republican Party of India (RPI).

Joining the Government

In 1942, he was invited to join Viceroy's Executive Council as Labour Member with three additional portfolios. As Labour Member, he influenced the British to concede 13% representation to Scheduled Caste (SC). The British gave just 8.33%. (Later, while writing the Constitution, he made a provision of 15% for SCs.)

He continued in this position till 1946. He was responsible for reducing the working hours of labourers from 12 hours to 8. He also introduced the concept of Provident Fund and Dearness Allowance. He created the employment exchanges. He introduced maternity leave for women. As a believer of free market, he introduced the Gold Standard.

He was the brain behind the Hirakud Dam and the Damodar Valley Project. He was also the brain behind the India's Water Policy and the Electric Power Planning.

Constituent Assembly

Under the Cabinet Mission Plan 1946 of the British Government, a Constituent Assembly was set up in 1946 in the then undivided India to frame the Constitution for India. The members were elected from different provinces.

Since Dr Ambedkar could not be elected from Mumbai, he was elected from East Bengal with the help of the Muslim League. These districts were later identified for inclusion in Pakistan. To prevent Dr Ambedkar from leaving the Constituent Assembly, Dr Rajendra Prasad (President of the Constituent Assembly) wrote a letter on 30th June 1947 to the then Prime Minister of Maharashtra (as he was called then) to get him elected from Maharashtra Province. Thus,



Dr Ambedkar with Members of Drafting Committee

he got elected to the Constituent Assembly again.

He was made the Chairman of the Constitution Drafting Committee on 29th August 1947. Although there were 7 members in the Committee, he was practically the only one shouldering the entire responsibility and burden of drafting.

The Draft Constitution was presented by Dr Ambedkar in the Constituent Assembly and was discussed and adopted by the Members. The Constitution was adopted in its complete form on 26th November 1949 and came into force on 26th January 1950, which is celebrated as the Republic Day of India.

While adopting the Constitution, all the members praised the extraordinary work done by Dr Ambedkar in drafting the Constitution.

Dr Ambedkar served as India's first Law Minister from 15th August 1947 in the Nehru Cabinet. Due to his differences of opinion on the Hindu Code Bill, which deprived equal rights to women, he resigned from the cabinet in September 1951.

Defeated in the Elections

During the first General Elections in 1951 to Lok Sabha, he contested from Bombay North, but lost to a little known Congress candidate, Narayan Kajrolkar, who was once his assistant.

He became a Member of Rajya Sabha as a nominated member in 1952 and continued as a member till his death.

In 1954, he contested again in a by-election held in Bombay Bandra. Here too, he was placed third and lost to a Congress candidate.

Sadly, Dr Ambedkar could not sit in the First Lok Sabha, the Constitution for which was created by him. The Second General Election was held in 1957 after his death in 1956. He could therefore not enter the Lok Sabha at all.

Conversion to Buddhism

He declared his intention to convert to another religion, public as a large section of the society was treated as untouchable by the Hindu section. Although Christians and Muslims approached him to convert to their religion, he preferred



Dr Ambedkar and his wife during 'Dhamma Diksha' at Nagpur

Buddhism. On 14th October 1956, Ambedkar, along with his wife, converted to Buddhism in the presence of a monk. Thereafter, he persuaded thousands of people of the Scheduled Caste to convert to Buddhism. He passed away on 6th Dec 1956 in his sleep.

His Bold Views

He was a great scholar and philosopher. He was bold in expressing his views. He preferred Sanskrit as the National Official Language. However,



Media Report – Dr Ambedkar for Sanskrit as Official Language of India

it was not approved in the Constituent Assembly. When Prime Minister Nehru wanted him to draft Article 370, he refused as he felt that it would be against the interest of the nation.

While all the modern historians argued in favour of the Aryan theory, he wrote that there was no race by that name. He also said that the theory that Aryans invaded India through Khyber Pass was false.

He openly criticised Mahatma Gandhi on various issues and even wrote a book titled 'What Congress and Gandhi have done to the untouchables'. In response to this book, Rajaji and K Santhanam wrote a book 'Ambedkar refuted', defending Mahatma Gandhi.

Forgotten Legend

There could be several people who had differences of opinion with Dr Ambedkar. But no one can deny the fact that Dr Ambedkar formed his views, based on his own experiences and despite the harassment he faced in the society. But for this legendary personality, India would not have got the time-tested and the much-acclaimed Constitution. Due to various reasons, he was not fairly recognised in the past by the Government and by the society. In 1990, he was

conferred the
Bharat Ratna
Award

posthumously,
under pressure
from political
parties.

In response to
an RTI activist,



Dr B.R. Ambedkar

The Indian society little supported the architect of Modern India when he was alive. It is time to stand up and salute him for his exemplary contribution to Modern India because although Dr Ambedkar was an 'exclusive member', belonging to the 'Depressed Class', his lifelong work, activities and contribution were inclusive and to the benefit of the nation as a whole.

Rusen Kumar (Raipur), Ministry of Information and Broadcasting disclosed recently that a documentary film on Dr Ambedkar made by the Government of India and Government of Maharashtra 14 years ago, is yet to be telecast through Doordarshan for public viewing.

The Indian society little supported the architect of Modern India when he was alive. It is time to stand up and salute him for his exemplary contribution to Modern India because although Dr Ambedkar was an 'exclusive member', belonging to the 'Depressed Class', his lifelong work, activities and contribution were inclusive and to the benefit of the nation as a whole.

By K. Srinivasan, Editor in Chief
Source: April 2015 issue of ezine PreSense

Lessons from the Sunken Titanic

"Well boys, you've done your duty and done it well. It's every man for himself now, and God bless you.... Be British."

These were purportedly the last words of Edward Smith, Captain of the historic ship, RMS Titanic, which sank soon thereafter in the early hours of April 15, 1912 in the icy



**RMS Titanic departing Southampton
on April 10, 1912**

waters of the Pacific Ocean. Ironically, this voyage was supposed to be Captain Smith's final one as he was on his final journey before retirement from service. The wreckage of the Titanic was discovered in 1985, on the sea bed around 12,500 feet below the surface, about 370 miles off the coast of

Newfoundland in North America.

When RMS Titanic set sail on her maiden voyage from Southampton, England, to New York, on April 10, 1912, she was considered the ultimate passenger liner – unparalleled in luxury, size and technology, so much so that the crew thought it 'unsinkable'. On April 14, 1912, she hit an iceberg at 11:40 p.m. The collision caused the ship's hull plates to buckle inward along her starboard side and open five of her sixteen watertight compartments to the sea. The ship sank slowly but surely.

Whatever be the mysteries that went under with the ship, the disaster has since been examined as case studies with valuable management lessons to learn from.

1. Preparedness for Crisis

Titanic was built with advanced safety features such as watertight compartments and remotely activated watertight doors. The ship therefore, did not equip with a sufficient number of lifeboats to accommodate all who were on board. During the rescue mission, several of the boats were released to the sea with only half its capacity of people filled.

Lesson Learnt: Critical crisis management training and preparedness is essential for a company to rise to the challenge of any crisis. Such training is directed towards creating situational leaders, with the ability to take appropriate decisions independently during the crisis.

2. Reality Check

When the iceberg hit Titanic, it punched holes in the ship's steel plates, allowing water to flood the ship's six compartments. It was later discovered from the ship's ruins salvaged from the ocean that the steel used were of substandard quality.

Lesson Learnt: Any compromise in the quality of staff, process, product and security systems even at the base level could cost a company dearly. As they say, a chain is only as strong as its weakest link.

3. Misplaced Confidence

"Not even God could sink this ship".

This was the verdict given by an employee about RMS Titanic. That confidence turned out to be arrogance when the ship broke



The Washington Post announces the disaster

into two and sank like a paper boat.

Lesson Learnt:

Organisations should have constant reality checks to ensure that their confidence in their company's systems or performance is based on factual back-up, and is not simply built on an optimism that disregards telling facts.

4. The Greatest Risk Often Lies Beneath

The greatest dangers lie unseen below the surface of the obvious. That night in 1912, the Pacific water was smooth like glass and deceptively dangerous. When the iceberg, which lurked below the waters tore the ship's hull, it was the crew working below, who saw the damage first before the first class passengers and the upper deck crew realised the gravity of the situation.

Lesson Learnt: Often, it is the alert staff working hands-on at the base level, who are first to be aware of the tell-tale signs of distress in a company. The feedback from these

workers must be recognised in the company. They may also be best equipped with the practical solution or safeguard.



A 102-year-old letter from the chief engineer of Titanic to his son has revealed that the ship almost collided with two other vessels as it left Southampton to begin its doomed voyage

5. Fast is Not Always Best

RMS Titanic was speeding on its cruise. When the iceberg was spotted, the ship had about 30 seconds to steer away

from it. The high speed at which it cruised was an impediment in manoeuvring the ship safely away from it.

Lesson Learnt: Companies often take the fast track to compete in the market. If it is not backed by awareness of the big picture in which the company is functioning, the company finally lands in an unexpected crash in the market.

6. Priorities in Place

RMS Titanic provided a wireless telegraph for the convenience of its passengers as well as for operational use. The wireless operators, inundated with the personal messages to send, became overworked and tired. This turned out to be critical.

Around 11:30 p.m. on April 14, when Titanic's wireless operator received a warning of an iceberg ahead, he ignored it. Later on, when he relayed the message, "*We have struck iceberg....sinking fast....come to our assistance*", the wireless operator on the nearby ship, had retired for the night, after being rebuffed about his iceberg warning. When the rescue ship finally arrived two hours later, only about 705 passengers could be rescued.

Lesson Learnt: Companies must not lose focus of its core mission and activity and be carried away by commercially more flamboyant activities or expenses. Some companies risk strained bottom lines, diverting money to items of administrative nature instead of operational essentials.

RMS Titanic might have sunk to the doleful music of "Nearer My God To Thee" as its swan song, played on the deck by the ship's band. Companies that ignore such crucial lessons, risk losing out on the big picture and into their swan songs.

With inputs from

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By Susan Koshy, Editor
Source: April 2015 issue of ezine PreSense

Netaji Files to Re-write History - West Bengal Government Declassifies 64 'Netaji Files'



Netaji Subhas Chandra Bose

In an historic event, Mamta Banerjee, Chief Minister of West Bengal, declassified 64 files (12,744 pages) relating to Netaji Subhas Chandra Bose, in the possession of her Government.

Although it is regarded a political 'master stroke' by Mamta, the Central Government is put in embarrassment. It is estimated that around 60,000 pages of 'Netaji Files' are classified. It is

also reported that 41 files are with the Prime Minister's Office; 27 files are with Ministry of

External Affairs and 77 files are with Intelligence Bureau of the Government of India. While the family members of Netaji Subhas Chandra Bose have been pressurising the Indian Government to declassify all 'Netaji Files', in August 2015, the Indian Government had decided not to declassify the files, as they considered it might hamper the relationship with some foreign countries. Netaji admirers and family members questioned how foreign relationship could be hampered by the declassification. In this background, Mamta's decision to release the 64 files in the custody of West Bengal Government, assumes serious significance.

Netaji's Death and the Mystery

In 1945, a news item appeared in a Japanese paper that Netaji lost his life in an air crash on 18th August 1945. Netaji's death itself is one of the most



Japan Paper dated 23 Aug 1945

controversial issues debated since 1945. Netaji's admirers accuse Nehru of undermining the importance of Netaji in India's freedom movement, as Nehru and Netaji were in opposite camps. The declassified files bring out earlier undisclosed documents to conclude that Netaji was alive in 1949.

Netaji's Family Snooped Even After Independence

Some of the documents disclose that the Central Government was snooping around Netaji's family members till 1971 and intercepting their mail through the Post Office.

Netaji followers state that the Indian National Army (INA) members who fought against the British under the leadership of Netaji are not recognised for pension or privileges as freedom fighters. Although Gandhi and Netaji Subhas Chandra Bose differed in their approach towards the freedom struggle, no one can underestimate the contribution made by Netaji Subhas Chandra Bose in getting the British Government to decide to grant freedom to India. The Bengalis had felt hurt when Netaji was sidelined by the Nehru Government, and Netaji's family members were snooped by the Intelligence agencies. The death of Netaji, and the reasons for snooping around Netaji family members till 1971, even decades after India getting freedom, remain a mystery.

The Soviet Union, which was in existence when Netaji was reported dead in 1945, is now totally disintegrated. The Labour Party which was in power then, is not in power now in England. Hence, some of the political parties and Netaji's followers question the wisdom of the Indian Government in not declassifying the remaining files on the flimsy reason of foreign relations getting affected. They suspect that it might only defame Nehru and the Congress Party.

To resolve the mystery of Netaji's death, various Committees were formed at various times.

The Figges Report, 1946

When Netaji was declared dead in an air crash in 1945, the British Government had set up an investigating team. They visited the INA offices and the spot. Colonel Figges submitted a report in July 1946. At the same time, a military intelligence report was also submitted. Although they confirmed Netaji's death, the supporting documents submitted by them differed in facts, including the time and date of death. Even though this report has not been officially released, it was released anonymously after 1997. This report was prepared by the British Government before Indian Independence.

Shah Nawaz Commission, 1956

As the Government of India had not taken any initiative to enquire into the death of Netaji after independence, some eminent citizens decided to start an unofficial probe. In response, Pandit Nehru appointed an official committee headed by Shah Nawaz Khan. He included Netaji's elder brother, Suresh Bose in the Committee. The Government made available some of the secret files to this Committee. This Commission confirmed the official version that Netaji Subhas Chandra Bose died in Taipei. Suresh Bose filed a dissenting report alleging that Khan was influenced by Nehru to stick to the official line.

Khosla Commission, 1970

The Indian government later set up a one-man inquiry commission, consisting of Justice G D Khosla, a retired judge of the Punjab High Court. He submitted his report only in 1974. Once again, Khosla concurred with the earlier reports.

Mukherjee Commission, 1999-2005

The Justice Mukherjee Commission was formed in



De-classified files by West Bengal Government

1999. The commission produced a report that ran into three volumes and thousands of pages, and was made public in 2006. The Mukherjee Commission Report concluded that Bose did not die in the air crash of 1945. His death and his cremation were engineered with the cooperation of the Japanese military authorities. The government rejected the report.

Cabinet Secretary's Committee, 2015

Since the classified documents contain information about his death, Netaji admirers and family members have been demanding the declassification. To review and decide on the declassification, a committee was set up in April 2015 headed by Ajit Seth, Cabinet Secretary, including officials from Intelligence agencies. Although the report is not available to the public, the Central Government has now decided not to declassify the 'Netaji files' in the custody of Central Government on the grounds of 'national security'.

Netaji Subhas Chandra Bose's death is shrouded in mystery and much fantasy is propagated as facts. According to Sugata Bose MP, a grandnephew of Netaji, declassification might not disclose anything significant, but could reveal the dishonourable things done by the upper echelons of India's post-Independence Government. Definitely, Netaji Subhas Chandra Bose deserved a better treatment in India.

Forgotten Hero

In 1992, the Government of India decided to honour Netaji with the highest civilian Award, 'Bharat Ratna'. The family members felt offended that while Jawaharlal Nehru, Indira Gandhi and Rajiv Gandhi were given Bharat Ratna in 1955, 1971 and 1991, Netaji was considered after 45 years of Independence.

Further, they also objected to his death not being confirmed by the Government officially. For these reasons, the family members rejected the Bharat Ratna Award.

Declassification of the remaining 'Netaji files' may create more ripples in Indian politics.

***By K Srinivasan, Editor in Chief
Source: Sep 2015 issue of ezine PreSense***

Forgotten Heroes of our Freedom Struggle



**Shri Arya
Bhashyam, who
hoisted the Indian
Tricolour, after
removing the
Union Jack in 1932
– a rare photo**

On 15th August 2016, India celebrated her 70th Independence Day. During the freedom struggle, many patriots had come out and fought against the British Raj, spending the prime of their youth in prisons. These patriots had also contributed to the independence and freedom we now enjoy. Their families suffered. Many of these patriots' grandchildren lead very simple lives. Sadly, but for a few top national leaders, several thousands of great men and women are not even known to the present generation.

The media, especially the television channels rarely talk about the freedom struggle and the sufferings of these great men and women who struggled for this freedom. During the Independence Day and Republic Day celebrations, the mainstream freedom fighters are lauded, with no mention about the true UnSung Heroes. Our school text books too recognise only a couple of the leaders of the Independence period. Many citizens across the country prefer to spend these national holidays entertaining themselves.

Many Indians are under the impression that our National Flag has been flying atop only since 15th August 1947. Very few are aware that on 26th January 1932 at 2 am, someone had dared to bring down the Union Jack and hoist the Indian Tricolour at the prestigious flag post of Fort St. George at Madras. This was by a 25-year-old vibrant youth named Arya K Bhashyam.

In 1919, as a young 12-year-old student, K Bhashyam (Arya was his pen name) was disturbed to hear about the massacre of hundreds of innocent people at Jallianwala Bagh by General Dyre. He was also inspired by Vanchinathan, who

shot and killed Collector Ashe in 1911 and later killed himself at Maniyachi Railway station. Bhashyam purchased four pistols secretly to kill the then Governor of Madras Province and later shoot himself. However, when he stood before the Governor face to face, ready to shoot him, a spark crossed his mind and he resolved not to resort to violence, but follow Mahatma Gandhi.

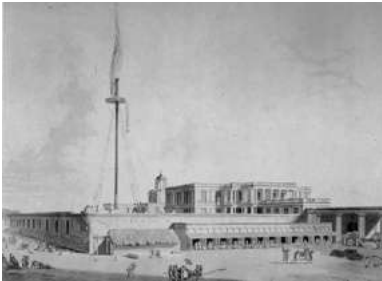
Spurred by Lokmanya Bal Gangadhar Tilak's vision of *Swaraj*, Bhashyam became a firebrand revolutionary and dared several feats protesting against the British colonial rule. He was imprisoned several times and tortured by the police.

The Fort St. George, Madras was built in 1644 by the British rulers as their first fortress in India. In 1687, they erected a 148-foot high flag post made of teakwood to stand as the tallest in the country. The Union Jack used to be hoisted on that flag post everyday. The British considered these two among the most prestigious emotional accomplishments by them.

26th January was considered the *Swarajya* Day by the Congress leaders then. Bhashyam wanted to hoist the Indian Tricolour on the Flag Post on Swarajya Day in 1932. Two days in advance, he personally made a large tricolour flag, using his *dhoti* and wrote in Tamil “இன்றிலிருந்து இந்தியா சுதந்திரம் அடைந்தது” (“From today India has attained independence”). He tied the tricolour *dhoti* on his waist to skip the notice of the security personnel. In the early hours of 26th January 1932 at 2 am, he arrived at the flag post. Arya Bhashyam shinned up the 148-foot flag post, removed the Union Jack from the ropes and hoisted the Indian tricolour. The Union Jack was torn into pieces.

No doubt, seeing the Indian tricolour flying atop the flag post infuriated the British and two days later, they arrested Arya Bhashyam and sentenced him to rigorous imprisonment in the Central Jail. He was treated as a ‘dangerous prisoner’ and kept in quarantine. Netaji Subash Chandra Bose was

also brought to the Madras prison during that time. Both Arya Bhashyam and Netaji became close associates.



Fort St George and the Teakwood Flag
Staff (100 years ago)

In an exclusive interview to the All India Radio during 1970s, Arya Bhashyam described the torture he faced with the police in the jail. He said he was given 30 lashes for questioning their atrocities. He continued to shout 'Vandemataram' while he was being given the lashes by the police.

Bhashyam was an artist and sculptor. After independence, he returned to a quiet and simple life. He refused the pension given to freedom fighters. He died in 1999 at the age of 93.

The Indian tricolour was hoisted in all the states, including Delhi on 15th August 1947. But Bhashyam accomplished this, way back in 1932.

Today, only a few records have registered his achievements. With great effort, *PreSense* traced his only available photograph. The teakwood flag post was replaced in 1994 with a steel replica by the State Government.

In every district of the country, there were thousands of such Arya Bhashyams, who are not known to the present generation. Both the Central and the State Governments should initiate efforts to identify these UnSung warriors and inform about their contributions, for the knowledge of the present generation. *PreSense* salutes these great men and women, who had contributed to India's freedom.

By Prime Point Srinivasan, Editor in Chief
Source: August 2016 issue of Ezine PreSense

Remembering Shaheed Bhagat Singh



Bhagat Singh, Sukhdev Thapar and Shivaram Rajguru

Bhagat Singh, Sukhdev Thapar and Shivaram Rajguru were hanged to death on 23rd March 1931 by the British Government.

Bhagat Singh was one of the most influential freedom fighters of the Indian freedom struggle. The title 'Shaheed' meaning 'martyr' most often precedes his name. Shaheed Bhagat Singh was a martyr who inspired the youth of the country to take part in the Indian independence movement.

Bhagat Singh was born into a Sikh family on 28th September, 1907 at Jaranwala Tehsil in Punjab. He was born into a family of revolutionaries. His birth coincided with the release of his father and uncles from jail. They had been imprisoned for carrying out anti-British activities.

Bhagat Singh's grandfather was a follower of *Arya Samaj*, the religious reform movement founded by Swami Dayanand Sarasvati. The young Bhagat Singh joined the Dayanand Anglo Vedic High School for his education.

At the age of 12 years, Bhagat Singh was greatly moved by the Jallianwala Bagh massacre in 1919, when thousands of people who had gathered at a peaceful public meeting were shot dead by the British. This tragic event sowed revolutionary sentiments in the mind of Bhagat Singh.

At the age of 14 years, Bhagat Singh was witness to another gruesome incident when a large number of unarmed people were killed by the colonial dictators at Nankana Sahib Gurudwara.

Thus, apart from being born into a family of revolutionaries, these violent incidents perpetuated by the British ensured that Bhagat Singh would also become a revolutionary at a young age. Bhagat Singh soon became a part of the Young Revolutionary Movement to defeat the colonial rulers. In March 1926, Bhagat Singh founded the Naujawan Bharat Sabha (Youth Society of India). The Youth Society of India sought to bring together youth peasants and labourers against the British.

When his family wanted him married, Bhagat Singh ran away from home, leaving behind a letter which read, *"My life is dedicated to noblest of causes, that of freedom of the country. So there is no worldly desire that can lure me now."*

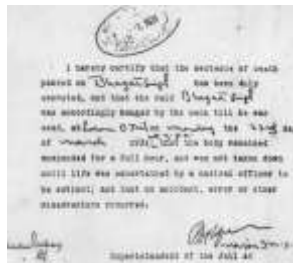


Death warrant of Bhagat Singh

Shivaram Rajguru in this assassination was carried out to avenge the death of Lala Lajpat Rai. Immediately after this, he went with Batukeshwar Dutt, another revolutionary, and threw bombs into the Central Legislative Assembly.

Bhagat Singh was soon imprisoned by the British. Even in jail, he continued his struggle, by undergoing a 4-month fast, seeking equal rights for Indian prisoners on the lines of British prisoners. Bhagat Singh was convicted by the British for carrying out the murder of John Saunders and

In 1928, Lala Lajpat Rai, another revolutionary, was killed by the British for leading a non-violent struggle demonstration against the Simon Commission. This infuriated Bhagat Singh who sought to take revenge. Bhagat Singh was then involved in the killing of the British police officer, John Saunders. Bhagat Singh was an accomplice with Sukhdev Thapar and



Death certificate of Bhagat Singh

was hanged on 23rd March, 1931, along with Sukdev Thapar and Shivaram Rajguru.

Bhagat Singh today finds a place in Indian Parliament in the form of a large bronze statue. There are innumerable memorials of Bhagat Singh at different parts of the country. There are many films on his life and stamps released in his name. He continues to be a source of inspiration for the youth of this country.

***By D K Hari and D K Hema Hari www.bharathgyan.com
Source : March 2017 issue of Ezine PreSense***

India's Political Destiny – Hope or Despair

India won its independence through the relentless freedom struggle by many political leaders and intellectuals, who led the country of people in a unique, non-violent war against foreign rule. Although the fight for independence was on the principles of non-violence, the days of partition and the birth of free India, witnessed many violent scenes as the country was territorially torn into India and Pakistan. Therefore, our freedom came at a heavy price. And we, as the future generations of Indians, should treasure the victory and nurture the country's welfare dearly and conscientiously.

Unfortunately, the state of affairs especially in the governance of the political and public offices of the country tells a sorry tale of corruption, lethargy, deceit and lack of conscientiousness – one that would make our martyrs turn in their graves. Surely, our forefathers would have rallied for a great and mighty India that its future generations would be proud to uphold and preserve.

Surprisingly, the great visionary, statesman and freedom fighter, C. Rajagopalachari (December 1878 – December 1972) had expressed a reserved prediction in 1921 itself, about the future state of governance in independent India, from his prison cell in Vellore, Tamil Nadu where he was imprisoned for his activist role in the freedom struggle.

C. Rajagopalachari, fondly known as Rajaji or CR, was the first and only Governor-General of independent India before the position was abolished, after India became a republic in 1950. He was better known as one of the active participants in the freedom struggle for independent India. He was a multi-faceted personality. He was an intellectual, a lawyer, a writer, an historian and a statesman. He wrote in 1921:

"We all ought to know that Swaraj will not at once or, I think, even for a long time to come, be better government or greater happiness for the people. Elections and their

corruptions, injustice, and the power and tyranny of wealth, and inefficiency of administration, will make a hell of life as soon as freedom is given to us. Men will look regretfully back to the old regime of comparative justice, and efficient, peaceful, more or less honest administration. The only thing gained will be that as a race we will be saved from dishonour and subordination."

Today, as the country gears up for the General Elections, there are many Indian citizens who remain disillusioned because they believe that irrespective of who wins, it would be, sadly, 'old wine in new bottle'. Lack of vision, and mud-slinging in election campaigns, horse-trading thereafter, unkept promises, a corrupt bureaucratic system, exploitation of the public welfare schemes to benefit a few, and continued disparity in the social and economic status of the people, has become ingrained so deeply that many see them all as part of Indian culture!



When former British Premier, Sir Winston Churchill declared in the British Parliament in March 1947, *"The Indian political parties and political people do not represent the Indian*

masses. It is a delusion to believe that they do. I wish they did", one attributed the statement to his prejudice against a developing country of people, under his Government's rule. But was it?

While India as a country, can boast of some outstanding achievements, as long as the majority of its common people do not stand to benefit, we still have a long way to go. When Gustavo Petro, Colombian politician and economist said, *"A developed country is not a place where the poor have cars. It's where the rich use public transportation"*, he described the essence of development. That is true democracy and development. Would the Indian people dare to dream of such 'utopia'?

Rajaji, while expressing despair at what the future of India held in governance, projected the way forward to a better India when he said, *"Hope lies only in universal education by which right conduct, fear of god, and love, will be developed among the citizens from childhood. It is only if we succeed in this that Swaraj will mean happiness."* He concluded the passage by cautioning, *"Otherwise it will mean the grinding injustices and tyranny of wealth."*

Today, it is generally perceived that the functionaries in our country, from the macro to the micro and grassroot levels, are 'elements of grinding injustices and tyranny of wealth', because of the extent of corruption and inefficiency. If so, will we be able to resurrect ourselves as a nation, to glory and honour, for which our forefathers had fought and won our independence? Hope lies in what Rajaji believed in - education where right values are inculcated.

We need to review our education system and revamp it to make it an effective medium for developing and grooming a sincere and committed population of Indians, and from among them, leaders committed to value-based governance.

by V.Rajendran, Editor
Source : Dec 2018 issue of PreSense

Section III: Indian Heritage

Kumbha Mela is the Confluence of Knowledge, Comparable with Modern Day Seminars of Experts

Purpose



The Kumbha Mela is one of the oldest and largest congregations of Indian civilisation. In a sense, it is more a congregation than a festival.

The intention for the *Kumbha Mela* in the ancient days was for the rulers, the common people and the *Sanyasis* to gather at a confluence of water bodies, stay for a period of three months and during that period, discuss the various aspects of *Sanatana Dharma*, its interpretations, its relevance for their present times, the problems that were faced by the society of that generation and the solutions for them within *Dharma*. This can be broadly compared with the modern day National and International Seminars on various themes bringing together various stakeholders under a single roof for discussions.

The *Snanas* (holy bath) that are taken on astrologically significant days are just ritual highlights. The primary objective of the *Kumbh* festival was to enable interactions among the rulers, the people and the *sadhus*.

In the *Kumbh* festival we see the connect between (a) the allegorical Puranic legend of creation from a *kumbh*, pot, (b) the traditional Vedic explanation of creation and (c) the modern cosmological scientific description of creation from the Big Bang.

Historical reference

There is mention of the *Kumbh* and the bathing ritual associated with it, in the Rig Veda (verse 10.89.7). It speaks of the values of bathing in the river during this period and how it eliminates negative influences and rejuvenates one positively, when done with piety. The praying to the *Kumbha* is also expressed in other Vedas such as *Atharva Veda* and *Yajur Veda*. This tells us that the concept of *Kumbha* and what it portrays has been venerated from Vedic times itself which goes back to at least 5100 years.

We learn this from the accounts of both Huan Tsang or Xuanzang (602 - 664 CE), the Chinese traveller who visited India between 629 - 645 CE, during the reign of King Harshavardhana, as well as from Harshacharita, of Bana, the court poet in the kingdom of Harshavardhana. This act of Emperor Harshavardhana reflects the ethos of the land, of giving *Dhana* at such confluences.



Even as recent as 1895, Mark Twain, the celebrated author, wrote his experience of visiting the *Kumbh Mela* in his book **"Following the Equator: A journey Around the World"**. The *Kumbh* festival was instituted and popularised by some of the ancient kings and saints as an occasion for congregating to discuss about creation as well as scientific and governance concepts. This festival was given the present format by Adi Shankara. Since then, for the last 2500 years, it has been celebrated in this format.

Types of Kumbh Mela

There are three types of *Kumbha Mela*: (1) *Ardha Kumbha Mela*, celebrated once every six years at Haridwar and Prayag, (2) *Purna Kumbha Mela*, which takes place every twelve years at four places in Prayag, Haridwar, Ujjain and Nasik and (3) *Maha (Great) Kumbha Mela* which comes after twelve *Purna Kumbha Melas* or 144 years, and is celebrated only in Prayag.

2013 *Maha Kumbh Mela* is celebrated from Sankaranthi day to Sivarathri. More than 100 million persons are expected to participate in this Kumbh Mela. This is the world's largest congregation.

Input courtesy: D K Hari and D K Hema Hari, Bharath Gyan

Source: February 2013 issue of Ezine PreSense

Electoral System in Ancient India

The concept of People's Republic (*Janapada*) has been in existence in India since ancient times. Historical evidence in the form of inscriptions was found on the walls of the village temples in South India. These inscriptions in the village of Uttaramerur in Tamil Nadu indicate the existence of electoral systems and electoral code of conduct. They date back to the reign of the Chola King, Parantaka Deva Parkesari Varman between 907 to 955 CE. Scholars are of the view that while village assemblies might have existed even before the period of Parantaka Chola, it was during his reign that the village administration was honed into a perfect system through elections.

The inscriptions throw light on the mode of election and governance. The village assembly or panchayat consisted of 30 wards. The period of the assembly was one year. The area of operation of the village assembly, viz. the panchayat, included the village sabha - Grama Sabha, garden sabha - Thotam Sabha and tank sabha - Eri Sabha.



The inscriptions also give details about the constitution of the wards, the qualification of the candidates standing for elections, the disqualification norms, the mode of election, the constitution of committees with elected members, the functions of those committees, the power to remove the wrongdoer, and so on. The villagers even had the right to recall the elected representatives if they failed in their duty.

The election ballot was in the form of a pot, in which the electors cast their votes for the candidates of their choice. Each person's preferred vote was inscribed on a palm leaf and dropped into the ballot pot.

Some of the qualifying criteria for candidates, standing for elections were that they should know Mantrabrahmana, be well read, have general knowledge to teach others, be conversant with business and should not have been on any other committee for the previous three years. Only those in the age group of 35 to 70 could contest elections. They had also prescribed a minimum land or property holding to be eligible for contesting.

Those charged for crime were barred from standing as electoral candidates for life. The kith and kin of candidates standing for elections were not eligible to stand for elections.

These inscriptions reflect a far superior practice of democracy and a fair system of elections and governance in the ancient times, as against the flawed practices that prevail these days.

***By Susan Koshy, Editor, PreSense
with input from D K Hari, Bharath Gyan
Source: March 2014 issue of Ezine PreSense***

How Vedas Were Transmitted over Thousands of Years

Veda is the recording by various Rishis over a period of thousands of years. The four Vedas, viz. Rig, Yajur, Sama and Adarvana Vedas are a treasure trove of knowledge. The Veda was compiled on the banks of the Saraswathi River as this river is mentioned in 72 different places in the Veda.

Veda Vysya, the Compiler

Approximately 5100 years ago, (around 3100 BCE), Rishi Krishna Dwaipayana, also known as Veda Vyasa, compiled the Vedas which was shared across various parts of the country, including some of the present neighbouring countries. Since then, the Vedas are transmitted down to our time orally. Hence, Veda is called 'Sruthi' - that which is heard and repeated.

Max Muller, a German Scholar was the first person to publish the Rig Veda in the 1860s. Max Muller described the sacred hymns as unparalleled in the literature of the whole world and their preservation as miraculous.

How Vedas were Transmitted over Thousands of Years

The unique aspect of Vedas is that the Samhitas (stanza) are recited verbatim even today, as it was recited 5000 years ago. On analysing, it was found that each Samhita or stanza of the Vedas was transmitted by 10 different methods, known as 'Pata' to maintain its purity. They are divided into 2 simple methods and 8 special methods called Ashta Vikriti.

Simple Pata - *Pada Pata and Krama Pata*

Ashta Vikriti- *Jata Pata, Mala Pata, Sikha Pata, Rekha Pata, Dhwaja Pata, Danda Pata, Ratha Pata, Ghana Pata*

These 10 Pata recitations ensure that their purity is preserved. The recitation of the 10 Pata also acts as a self error-correcting methodology. Krishna Dwaipayana framed these 10 techniques so that its knowledge is etched in the

minds of those who recite them. It is the oral system of knowledge transmission that has withstood the test of time.

Beyond Religion

The Veda text does not speak about the Gods in the way we relate to them now. They speak about the divinities only as natural phenomena.

In the last couple of thousand years, various scholars have understood and relished the Veda more from a religious perspective. There is also a very scientific way of looking at the Veda without the connotation of the religious gods.



Access to the Vedas is the greatest privilege this century may claim over all previous centuries.
(J. Robert Oppenheimer)

A few scientists who have had the good fortune of going through the Vedas have realised this. Professor J Robert Oppenheimer who is considered the

father of the American Nuclear Bomb, said "access to the Veda is the greatest privilege, this century may claim over all previous centuries."

***By K Srinivasan, Editor in Chief
with input courtesy of D K Hari, Bharath Gyan
Source: August 2013 issue of Ezine PreSense***

Nalanda University

Nalanda University in Bihar, India was an ancient centre for higher learning. It was constructed in the 5th century C.E and was supported by the patronage of the Gupta rulers, the



Pala Kings and others in that region. The site is located near the then Capital city, Patna, and was a religious centre of learning for a very long period. There were over 10,000 students studying there with nearly 1500 teaching scholars.

In the name Nalanda, Nalan means lotus and this flower symbolises Knowledge. Lotus is the flower that we use to relate to Goddess Saraswathy – The goddess of knowledge and arts. Buddha had stayed there on two occasions and hence this place was chosen. A Buddhist monk who visited Buddha, began to preach Buddhism, and a monastery was started. After the demise of this monk, his stupa was erected here. This place was close to Pataliputra- capital of Magadha Kingdom and with the support of the kingdom, the monastery was expanded to a university in a period of 400 years.

The University complex was built with red bricks. The area of the present excavation site is 14 hectares which is about one-tenth of the space of University. During its peak time, the university attracted scholars and students from as far away as Tibet, China (the land to the east), Suwarnabhoomi – Indonesia, Champa – Vietnam, Philippines, Afghanistan, Yavana - Greece, and Persia. Each block situated at the perimeter, had residential rooms and the central yard held the teaching rooms. There were many temples for Buddha and Surya – The Sun God. "Dwarapanditha" was the test conducted for admitting the students to the University. The tests were so vigorous that the success rate was 1 out of

every 5. A similar practice is applied by the educational institutions and corporates in different forms nowadays.

The Nalanda University was destroyed three times on different occasions. The University was refurbished after the first two attacks. The third time, it was ransacked and destroyed by Bakhtiyar Khilji in 1193 C.E and was not revived. The great library of the Nalanda University was so vast that it is reported to have continued burning for a very long time after the invaders set fire to it, ransacked and destroyed the monasteries, and killed the monks at the site.

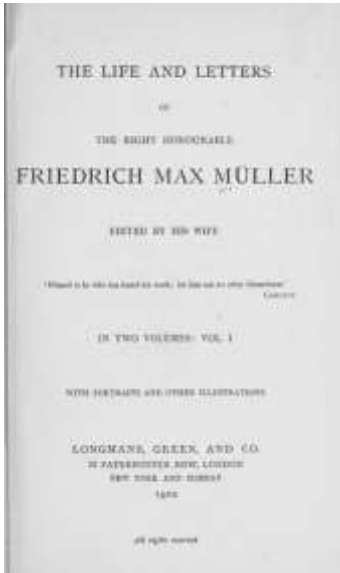
The value of the University was well recognised and the very concept of 'university' went to Persia, Arabia and the West only after the Nalanda University. Hence this place is marked as an important archaeological site of India today.

***By Sukruti A Vadula, Editorial Member
with input from D K Hari, Bharath Gyan
Source: October 2013 issue of Ezine PreSense***

The First 'Phonograph' was Tested with 'Rig Veda', which Passed through Thousands of Years in a Phonographic Way

Quoted verbatim from the book: The life and letters of the Right

Honourable Friedrich Max Muller; ed. by his wife (1902) – Published by London Longmans, Green 48 The Bell Telephone [ch. Xxm] (relates to the year 1878). Just before going to London to deliver his last lecture, Max Muller had asked his friends in Oxford to meet Mr. Graham Bell, the inventor of the Bell telephone, which preceded Edison's more perfect instrument. It was the first of its type ever heard in England. A large company gathered together, and intense interest and surprise were felt by everyone, including the scientific men present, little dreaming of the immense practical importance of the invention, and the possibility of the almost limitless extension



now attained to. Mr. Bell also brought down a microphone, only just invented, and a phonograph. The wire of the telephone was stretched from one end of the garden to the other, and even a whisper was distinctly heard. The wire of the microphone was brought from a room on the second story, and the sound made by a fly crawling along a board in the room upstairs sounded in the garden like the tramp of an elephant. The phonograph was not good, and even one person at a time found it difficult to make out what it repeated. The following week, in London, Max Muller was asked to speak into a better instrument. The scene has been well described by Mr. Moncure Conway:

'When the phonograph was invented, one of its first appearances was at the house of J.Fletcher Moulton, Q.C.

(now M.P). A fashionable company, among them some eminent men of science and men of letters, gathered round the novelty, and Max Muller was the first called on to utter something in the phonograph. We presently heard, emanating from it these sounds: "Agnim i/e purohitam ya^;asya devam r/tvi^am — hotaram ratnadhatamam."

There was a burst of merriment when these queer sounds came from the machine, but a deep silence when Max Muller explained that we had heard words from the oldest hymn in the world, the first (if I remember rightly) in the Rig-veda:

"Agni I worship; the chief priest of the sacrifice, the divine priest, the invoker, conferring the greatest wealth." And then the young people gathered around the smiling scholar, to learn that the hymns had all passed through thousands of years, in a phonographic way, each generation uttering precisely what was poured into its ear by the preceding generation, until their language died, to be recovered in the West, where for the first time the real meaning of Agni, and the human significance of the hymns, were studied and known.



Source: September 2012 issue of Ezine PreSense

Shiva's Cosmic Dance is the Dance of Sub-atomic Matter

In 2004, a tall statue of the dancing Shiva was unveiled at CERN, the European Center for Research in Particle Physics in Geneva. CERN is Switzerland's pre-eminent center of research into energy, the "world's largest particle physics laboratory" and the place where core technologies of the internet were first conceived.

A special plaque below the Shiva statue explains the significance of the metaphor of Shiva's cosmic dance with quotations from Fritjof Capra (73), an American Physicist.



"Modern physics has shown that the rhythm of creation and destruction is not only manifest in the turn of the seasons and in the birth and death of all living creatures, but is also the very essence of inorganic matter and for the modern physicists, then, Shiva's dance is the dance of subatomic matter. Hundreds of years ago, Indian artists created different forms of visual images of dancing Shiva in a beautiful series of bronzes. In our time, physicists have used the most advanced technology to portray the patterns of the cosmic dance. The metaphor of the cosmic dance thus unifies ancient mythology, religious art and modern physics."

The parallel between Shiva's dance and the dance of subatomic particles was first discussed by Fritjof Capra in an article titled "The Dance of Shiva: The Hindu View of Matter in the light of Modern Physics," published in Main Currents in Modern Thought in 1972. Shiva's cosmic dance then became a central metaphor in Capra's international bestseller, The Tao of Physics, first published in 1975. It is still in print with over 40 editions and still going strong.

By K Srinivasan, Editor in Chief, PreSense
Source: July 2012 issue of Ezine PreSense.

Ancient Indians Performed Sophisticated Surgeries through Ayurveda



Susrutha

Ayurveda is the knowledge of the life sciences of India developed thousands of years ago. Ayurveda is not just rejuvenation massages, Churan (herbal balls) and Kashayam (herbal decoction), as it is believed now.

In the Mahabharata, Ayurveda was called the science of eight components, which included internal medicine, paediatrics, surgery, ophthalmology, ENT, etc.

It is believed Dhanvantri is the God of Ayurveda. Charaka and Susrutha are just two names in this field. The Caraka Samhitā (or "Compendium of Caraka" is an early Ayurvedic encyclopedia on medicine.

Sushruta Samhita is the main reference book for ayurvedic surgeons and details lot of surgical procedures. The medical compendiums of both Sushruta and Charaka were translated into Arabic language during the Abbasid Caliphate (750 AD). These Arabic works made their way into Europe via intermediaries.



Surgical instruments used by Susrutha

Charaka is considered as the 'Father of Medicine' and Susrutha is considered as 'Father of Surgery'.



Charaka

It is found from these ancient scriptures, they were performing plastic surgery, cataract surgery, surgery of the bladder, and dissection procedures too. The smallpox vaccination originated in India. 121 surgical instruments are described in these books.

Surgeons were trained. Takshasila – Maha Vishwa Vidhyalaya University specialised in advanced medical training for over 500 years and attracted students from various countries of the world.

***With input from D K Hari, Bharath Gyan
Source: November 2012 issue of Ezine PreSense***

Arthasastra Talks about Modern Day Governance Mantras, including Encryption of Communication



Arthasastra, the popular treatise on Indian administration, was written by Chanakya, who is also known as Kautilya. This book was written more than 2000 years ago.

Arthasastra is an Administration Manual for the rulers. Guidelines for administration of a state are not new to India. Even in Ramayana (7000 years back), Rama advises Bharatha about good governance, which is now called 'Rama Rajya'. Even in Mahabharata,

Bhishma at the time of his death, advises Dharmaputra about good governance.

Although Arthasastra dates back to 2000 years, the concepts are relevant even for the modern day governance of the State and the Corporates.

While there were many references found in the ancient literature, the original palm leaves of Arthasastra were found only 100 years ago. Till such time, it was considered a lost book. In 1911, the curator of the Oriental Research Institute, Sri Shyama Shastri stumbled upon the full palm leaf manuscripts of Arthasastra, while going through the bundles of palm leaf manuscripts.



Megasthenes, a Greek ambassador after Alexander's visit, travelled to India and wrote about Arthasastra in his work Indika and popularised Arthasastra in the Western world.

Arthasastra consists of 15 chapters. These chapters deal with the duties of the government, law making, managing war, spying, etc. What is more interesting is that even in those days, Arthasastra talked about land reforms, sustainability and prosperity, which are now considered new-age mantras. Kautilya says that Artha (Sound Economies) is the most important.

In these days of increasing instances of national espionage and usage of cryptography in communication etc. it would be interesting to note that Kautilya who was among the earliest to speak about usage of spies in national security, cryptography in communication, duties of rulers to guard the secrets of the nation and to protect those who give 'information', acting as spies etc.

It is no wonder that multinationals are now more interested in studying Arthasastra, to adopt some of the best practices.

Input by D K Hari
Source: December 2012 issue of Ezine PreSense

The Universal Word of Aum/Om/Amen/Ameen/Shalom

In the Beginning

Ancient teachings and modern science agree that all things in existence are made up of vibrating, pulsating energy. This energy is said to manifest as a humming vibration, inaudible to the human ear.



In the Sanskrit language, this sound is called Anahata Nada, the "Unstruck Sound". Literally, this means "the sound that is not made by two things striking together." The point of this particular distinction is that all ordinary audible sounds are made by at least two elements, eg. bow and string, drum and stick, two vocal cords, waves against the shore, wind

against the leaves. All sounds within our range of hearing are created by things visible or invisible, striking against each other or vibrating together, creating pulsating waves of air molecules which our ears and the brain interpret as sound. Sound that is not made by two things striking against each other is the sound of the primal energy, the sound of the universe itself. This sound is likened to the humming of an electrical transformer. It is the inaudible humming of the atoms and molecules within every creation.

The ancient scriptures say that the audible sound which most resembles this unstruck sound is the Word, Aum. Tradition has it that this ancient mantra is composed of four elements. The first three are vocal sounds: A(Aaa), U(Ooo), and M(Mmm). The fourth sound, which is inaudible, is the apparent silence before and after the audible sound, the silence which surrounds it.

The Religious Aspect

The sound, Aum is commonly associated with ancient Hindu scriptures. It is so sacred in Hinduism that it is prefixed and suffixed to mantras and incantations. It is undoubtedly the most representative symbol of Hinduism. The Hindus believe that before creation began, it was Shunyākāsha, meaning the emptiness or the void. In the state of Shunyākāsha, which literally means "no sky", everything in the void existed in a latent state of potentiality. As creation began, the divine, all-encompassing consciousness took the form of the first and original vibration, manifesting as the sound, Aum. The vibration of Aum symbolises the manifestation of God in form and it is said to be Adi Anadi, meaning without a beginning or an end, and embracing all forms that exist.

The significance of the word is not confined to the Hindu scriptures. The Bible talks about it in its New Testament, "In the beginning was the Word, and the Word was with God and the Word was God" (John 1:1). Other religions too recognise the sound or Word, Aum in its equivalents – Amen to the Christians, Ameen to for the Muslims, Shalom to the Jews, Om to the Buddhists.

The Scientific Aspect

A constant contention that science has with religious and spiritual thoughts, is that these religious 'truths' cannot be verified by experimentation or proof. Rational thinkers are therefore reluctant to accept these 'abstract' thoughts and beliefs. In this backdrop, the significance and effect of the utterance of Aum for the integrated well-being of the body, mind and inner being, gained recognition after scientific experimentation came out with some revealing observations in the following studies.

It is known that the audible range for human beings is between 20Hz(Hertz) and 20KHz(Kilohertz). What we know from the study of the musical sound is that the sounds we encounter in routine settings have a range starting from just

below the mandra saptak, or the lower octave (256-512Hz) to the tar saptak, or the middle octave (1024-2048Hz). However, the chanting of Aum requires very low frequencies - below 100Hz, with some components of infrasound (below human audibility). Since the utterance of Aum is a combination tone of three syllables, A-U-M, one study attempted to find out the frequency components by using a mathematical frequency analysis to transform function of time to function of frequency (FFT or Fast-Fourier-Transform). The sound Aum, recorded from a person, was fed to a cathode ray oscilloscope to observe the waveform.

The result showed component frequencies well below 100Hz. This is regarded as the meditative state of that person. Electroencephalograph (EEG) studies of Aum-chanting brain-wave frequency analysis revealed good, harmonious effects on the person during the low frequencies (lower than 100Hz, including infrasound lower than 20Hz). This observation led to the conclusion that the chanting of the universal Word had definite health benefits on the human body.

There is therefore more to this Universal Word than is currently recognised by the world. This Word is believed to be not only the sound of the Universe, but also a prayer by itself.

***By Susan Koshy, EditorSource:
September 2014 issue of Ezine PreSense***

Thanjavur Big Temple – An Architectural Marvel

Great Dream of Raja Raja Chola I

The Brahadeewarar temple, also known as the Big Temple at Thanjavur (Tamil Nadu) is dedicated to Lord Siva. It was built by the great Chola King Raja Raja 1 (985 -1012 A.D, and is one of the outstanding examples of our ancestors' architectural, engineering and astronomical heritage. UNESCO has declared it a World Heritage Monument recognising its importance.



Emperor Raja Raja Chola I was a great dreamer and aspired to achieve something 'great'. That motivated him to build this unique temple, which is an engineering marvel. Even today, civil engineering students and professors from various leading national and international institutes visit this temple to learn from this great marvel.

Chief Architect

"Kunjara Malla Perum Thachan' was the Chief Architect of this temple" says Sthapathi K P Umapathy Acharya who belongs to the clan of Kunjara Malla Perum Thachan. As per records available, the chief architect was honoured by Emperor Raja Raja Chola I with the titles, 'Veera Cholan' and also 'Raja Raja



Inner hollow portion of vimanam

Perum thachan', the highest honour of that time.

Interesting Facts about the Structure

During the present time, when buildings with huge foundations collapse in less than 100 years, this temple with a huge construction remains intact, braving all natural calamities, with a foundation of only 7 feet. Can you believe this?

The big temple complex was completed by Raja Raja Chola in 1010 AD. As per epigraphic evidence, the temple construction began in his 19th year of rule and was completed on the 275th day of his 25th year of rule. One wonders how such a big temple could be built in just 6 years, taking into account the amount of stone and soil to be moved and the lack of powered machinery available in those days.

The temple is made up of about 130,000 tons of granite. There are five stages of 'Gopurams'. The central 'vimana' is 216 feet from the ground level and has a 13-tier structure. The towering vimana weighs about 43,000 tonnes and has a square base measuring 96 feet. The whole vimana structure progresses up in a conical shape and has a shikara weighing 81.28 tonnes. This massive shikara was moved to this position by building a ramp of 7 kms from a village which still exists with the name "Sarapallam".

Foundation of 7 Feet and Vimana Architecture

The whole vimana has a foundation of only 7 feet and it is built in such a way that the weight is evenly distributed on the base foundation. The whole Vimana is built using granite rocks and is covered by a thin layer of mortar to preserve the granite sculptures inside. The vimana has a hollow structure similar to the Pyramids of Giza and the entire structure is made of stones interlocked with the ball and socket joint technique with no binding material used to hold the structural parts. This is nothing less than an engineering marvel considering the fact that this temple has withstood 6

recorded earthquakes and no major damage has been reported.

There is a big statue of Nandi (sacred bull), carved out of a single rock, at the entrance measuring about 16 feet long and 13 feet high

Paintings and Carvings

Chola paintings are partly visible on the walls and the ceiling, as they have been overlaid by the paintings of the rulers after the Chola era. These paintings were done with natural mineral colours called 'Varna Lepana' and these paintings continue to remain intact, even after 1000 years. 108 miniature dancers in different poses are carved on the basement of the upper passageway walls.

Rainwater Harvesting

The temple has been constructed in such a way that the water during rains, as well as the water used during the 'abhisekam' are fed to the adjacent 'sivaganga tank'.

In spite of the recognition by UNESCO, the Indian Government is yet to showcase it as a tourist attraction among the Indian and foreign tourists, and promote our ancient Indian wisdom.

Source: July 2013 issue of Ezine PreSense

Ravana had Six Airports in Sri Lanka

Nowadays, we see some of the State Governments and individuals owning helicopters. Around 7100 years ago, during the Ramayana days, the Sri Lankan King Ravana had 'Vimanas' (flying machines), in his airport hangars for his use. According to Valmiki Ramayana, Ravana had 6 such airports. They were Weragantota in Mahiyangana, Thotupola Kanda at Hoton Plains, Usangoda on the southern coast, Wariyapola in Kurunegala, Wariyapola in Mattale and Gurulupotha in Mahiyangana.



(picture)

When Rama was flying over Sri Lanka in the Pushpaka Vimana after killing Ravana, he described the aerial view to Vibishana, saying "Lanka shines on the earth, studded with many Vimanas" (Valmiki Ramayana, Yuddha Khanda, Sarga 20):

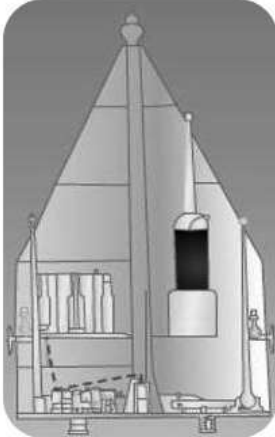
विमानै बहुमिल्लङ्का संकीर्णा भुवि राजते ।
विष्णोःपद्मिषाकाशे छादितं पाण्डुभिर्धनैः ॥१०॥

The story of Ravana flying in the Vimana with his wife Mandodari is etched as the insignia in the famous hotel, Galle Face Hotel of Colombo, Sri Lanka.

Books on Vimana Sastra

Texts like Ramayana and other Puranic texts speak about the stories of Vimana. The technical details on Vimana are available in a few other texts in India. The more prominent among these is the Vaimanika Shastra written by Maharishi Bharadwaja. In this treatise, Maharishi Bharadwaja states that he was only compiling information available at his time for various Vimana and that most of them were prior to his time. He writes about 120 different Vimanas that existed in

different times in different lands. He also gives glimpses of fuels used, aeronautics, avionics, metallurgy and other manoeuvres that were deployed in flying these Vimana. Besides, Yantra Sarvasva (by Maharishi Bharadwaja) and Samarangana Sutra Dara (by Raja Bhoja) also give more technical details about the 'flying machines'. These great books had with technical drawings of the ancient vimana and have also been translated into English in the last hundred years.



Sketch of Sundara Vimana

Four types of Vimanas are described in the ancient scriptures. They are (1) Rukma (Conical in shape, golden in colour), (2) Sundara (Rocket like with silver sheen), (3) Tripura (Three storied, wide body) and (4) Sakuna (Greyish in colour, long distance cruising model). Based on the description, technical sketches have also been drawn. The metals and fuel used and the various purposes are also found in these scriptures.

***By K Srinivasan Editor in Chief
with Input from Mr. D K Hari, Bharath Gyan***

Source: October 2012 issue of Ezine PreSense

Sri Ramanuja – Combining Spiritualism with Social Justice

The nation is celebrating the thousandth birth anniversary of Sri Ramanuja (1017-1137), a spiritual leader who lived in the 11th century. In those days of caste suppressions, Sri Ramanujam as a spiritual leader introduced several practices braving all oppositions, in order to promote social justice.



Sri Ramanuja as in
Srirangam Temple

Social Justice

Sri Ramanuja is believed to have lived for 120 years dedicating his entire life to a spiritual life with social justice. Although he was born in a Brahmin family, he selected his spiritual Guru from a different community.

One thousand years ago, when temples forbade the entry of 'lower' caste people, Sri Ramanuja allowed them into the temple and to participate in all the temple rituals. He accepted his '*sishyas*' (students) from all communities, including the 'downtrodden' caste. He treated them all equally. He valued a person not by his birth or caste but by his devotion to God, irrespective of his social status. He addressed the downtrodden caste people as '*Thiru Kulathar*' (meaning Descendants of Maha Lakshmi). It may be noted that Mahatma Gandhi in the 20th century called them '*Harijans*' (Descendants of Lord Vishnu). Sri Ramanuja administered '*Pancha-samaskara*', to all people irrespective of their caste. '*Pancha-Samaskara*' was a ritual which was administered only to the upper caste people, to initiate them into '*Vaishnavism*'.

Management Qualities

He created 'Standard Operating Procedures' for all *Vaishnavite* temples, thus providing the opportunity to all the people irrespective of their community, to worship and participate in the rituals. The concept of 'social engineering' was introduced by him in those days. Even today, all the *Vaishnavite* temples in the South follow this procedure.

Muslim Princess Honoured in Hindu Temple

When the Moghul King conquered the Mysore area and took away the idol of Lord Vishnu from the Melkote temple, Sri Ramanuja went all the way from down south, to Delhi and brought back the idol and re-installed it in the temple. The Muslim princess at Delhi who was fond of the idol, could not bear the separation and came down to Melkote. In her honour, Sri Ramanuja established a shrine in the temple and named the shrine 'Bibi Nachiar'. Even today, only Roti is offered in this shrine in accordance with her tradition.

Social Responsibility

Sri Ramanuja provided free '*prasadams*' to all devotees. He constructed many '*Ramanuja Kootams*', similar to the modern day '*Yatri Nivas*' and provided free food and shelter to all pilgrims. He insisted on the cleanliness of the temple kitchen in all temples. He was also a great visionary. He renovated many temple tanks and constructed tanks in villages. He insisted on 'rain water harvesting' to ensure sufficient water supply to the people all times. He designed and built a lake near Melkote between two rocky hills. He named this lake Thirumala Sagar.



Thondanur lake

This lake, popularly known as Thondalur Lake has medicinal properties and that its water has never dried up since its creation, even in severe drought conditions.

Spiritual Works

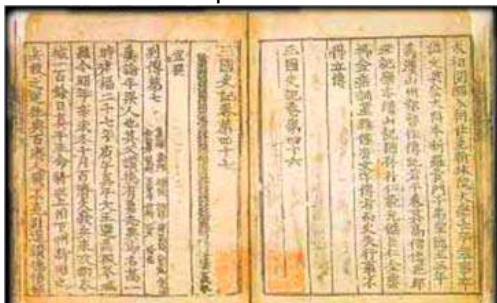
He travelled the entire nation and created a mass movement on 'spiritual renaissance', combining spirituality with social justice. He authored several books in Sanskrit. His books, *Sri Bhashyam* (inner meaning of Brahma Sutra) and *Gita Bhashyam* (inner meaning of Bhagwat Gita) are considered authoritative by scholars today. Sri Ramanuja's concept of social justice has greater significance in the world and the society today.

By K. Srinivasan, Editor in Chief

Source: April 2017 issue of Ezine PreSense

Indo-Korean Connect Through Ayodhya

In the backdrop of the recent visit of the South Korean President to India, it is interesting to note that history traces strong links between India and Korea. Dating back to the year 48 CE (Common Era), one of the famous kings of Korea, King Kim Suro, who started the Kara



History Book, Sam Kuk Yusa

Dynasty, married the Indian princess of Ayodhya. She became the queen of Korea and took on the name, Hwang Huh. History records that Queen Huh was a princess in the kingdom of her father, the king of Ayodhya. It is believed that the king of Ayodhya, on receiving a divine revelation, sent her on a long sea voyage to the Kara kingdom in southern Korea to marry King Suro.

The Kara clan, of which King Kim Suro was the first king, comprises about two-third the population of Korea. The children of King Kim Suro and Queen Huh, formed the Kim Hae Kim clan and took on the surname of Huh from their



Statues - King Suro and Queen Huh

queen mother of Indian origin. Today, there are 6 million Huh descendants of the Korea-India lineage spread across the world. Much of the information relating to this lineage is recorded in the Korean history book, "Sam Kuk Yusa" i.e. "History of Three Kingdoms", written in the 11th century.

In the year 2001, the mayors of Ayodhya and Kim-Hae City (in South Korea) signed a "Sister City Bond", and a monument in commemoration of the ancient ties between Korea and Ayodhya, was erected in Ayodhya. The international President of the Huh clan, Professor B.M.Kim made an official ceremonial visit to Ayodhya to install a plaque affirming their ancient royal lineage with Ayodhya.

This plaque was shipped all the way from Korea and is a place of pilgrimage for the six million descendants of this lineage. The lines inscribed on the plaque trace the origin of the historical ties, to the middle of the first century CE. The plaque also states that according to Sam Kuk Yusa, the ancient history book of Korea, Queen Huh, wife of legendary King Suro, who founded the Kara Kingdom, was born in Ayodhya.

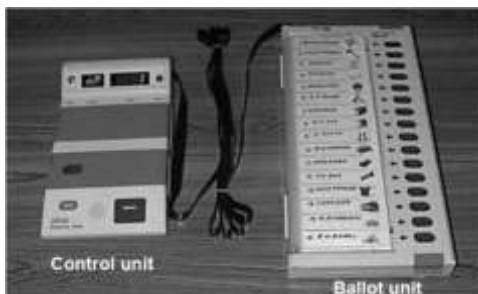
Later in 2004, the Korean government declared Ayodhya as the sister city of Kim-Hae City, and another monument in the memory of Queen Huh was erected there.

***By Susan Koshy, Editor-in-Chief
(with input from the book, "Ayodhya – War and Peace"
by D.K.Hari & D.K.Hema Hari, Founders, Bharath Gyan)
Source: July 2018 issue of PreSense***

Section IV: Governance and the Government

Snippets about Indian Elections

Electornic Voting Machines (EVM): Nearly 11 lakh Electronic Voting Machines are used in the General Elections, covering 8.5 lakh polling stations. EVMs were devised and designed by the Election Commission in collaboration with two Public Sector Undertakings viz., Bharat Electronics Ltd., Bangalore and Electronic Corporation of India Ltd., Hyderabad. Every



machine can support 64 candidates and record 3840 votes. Since every polling station in India has a maximum of 1500 voters, one EVM is sufficient for every station. EVMs manufactured in 1989-90, were used on an experimental basis for the first time in 16 Assembly Constituencies in the States of Madhya Pradesh (5), Rajasthan (5) and NCT of Delhi (6), in the General Elections to the respective Legislative Assemblies held in November, 1998.



Indelible Ink or Voter's Ink: This special ink is manufactured by Mysore Paints and Varnish Limited, a State owned public sector company in Karnataka. This company supplies the indelible ink to several other countries too. This ink dries in 40 seconds and cannot be removed for

20 days. This prevents fake voting. A 10-ml bottle can be used for 300 voters. This company supplied 2 million bottles in the 2009 General Elections.

First Chief Election Commissioner of India

Shri Sukumar Sen, a Civil Servant from Bengal was the first Chief Election Commissioner of India. He prepared the first electoral rolls of the country and developed the systems. The first General Election was held between 25 October 1951 and 21 February 1952. During this first election, a different ballot box was used for each candidate, rather than using the ballot paper! Different coloured boxes represented different parties. Later, ballot papers were introduced with the candidate's name and symbol. In 2004, EVMs were used in all the 543 Lok Sabha constituencies. 1033 candidates contested in the Modakurichi assembly constituency in Tamil Nadu in 1996. The ballot paper was in the form of a booklet!



Nation's 5 biggest and 5 smallest constituencies according to area:

Biggest constituencies:

Barmer (Rajasthan) :
71601.24 sq-km
Ladakh (J&K) : 173266.37
sq-km
Arunachal (East) (AP):
39749.64 sq-km
Kuchh (Gujarat) : 41644.55
sq-km
Arunachal(West) AP:
40572.29 sq-km

Smallest constituencies:

Mumbai South: 13.73 sq-km
Mumbai South-central: 18.31
sq-km
Delhi sadar: 28.09 sq-km
Chandni chowk (Delhi):
10.59 sq-km
Kolkata north west 13.23 sq-
km

By K Srinivasan, Editor in Chief, PreSense
Source: February 2014 issue of Ezine PreSense

Case Study – Political Intolerance

Ananda Vikatan, a leading Tamil weekly published a cartoon on the cover page of its issue dated 29th March 1987. (Picture left).



In the cartoon, a member from the audience asks another, “Which is the MLA and which is the Minister”. The other person replies, “The person who looks like a pickpocket is the MLA and the person who looks like a dacoit is the Minister”

When the issue was released, the Tamil Nadu Assembly was in session. One member raised the issue of this cartoon as ‘breach of privilege’. The Speaker of the Assembly

demanded an apology from the editor.

In the next issue, the Mr S Balasubramanian, Editor of the weekly, wrote an editorial saying, “This cartoon is about the politicians who come to power using democracy and then betraying the trust of the people. This cartoon can apply to any country”.

Not satisfied with the response by the Editor, the Assembly passed a resolution imposing a three month imprisonment to Mr Balasubramanian, Editor. The Editor was arrested. Immediately, the entire



media in India and world over objected to this arrest, as it was considered interference in the freedom of press. Even BBC carried a strong message.

Since the issue was taken up by the global media, the speaker ordered the release of the Editor after two days. The Editor came out of the prison a victor. (picture)

At that time, the Times of India carried a cartoon by R K Lakshman. In the cartoon, a politician tells the Editor, when he comes out of the prison,

"Remember, no more funny cartoons like this about us, distorting our public image". (picture right)



After release from the prison, Mr Balasubramanian filed a 'defamation case' in the High Court, Chennai demanding a token compensation of Rs.1000/-. After seven years, in Sep 1994, the High Court ordered a compensation of Rs.1000/-, declaring the arrest as 'unconstitutional and null and void'. The Tamil Nadu Government paid the compensation by cheque (picture).



Ananda Vikatan displays an enlarged picture of this cheque in their office as a symbol of 'freedom of expression'. – Photo courtesy:

Ananda Vikatan

Source: December 2008 issue of Ezine PreSense

New Pope takes over

Vatican panorama from St.Peters Basilica



Subsequent to the sudden resignation of Pope Benedict XVI on 28th February 2013, the papal conclave of 2013 was convened to elect a pope. On 12th March 2013, 115 cardinal-electors gathered at the Vatican to begin the conclave. White smoke was seen emanating from the Sistine Chapel chimney on 13 March at 19:06 local time, following the fifth ballot, the bells began pealing minutes after, signifying the election of a new pope. The conclave elected Jorge Mario Bergoglio, an Argentine cardinal and Archbishop of Buenos Aires, who selected the papal name of Francis, in honour of Saint Francis of Assisi, an admirer of nature and a servant to the poor and destitute. Pope Francis assumed charge on 19th March 2013 with a Mass in Saint Peter's Square.

With the election of the new Pope, he assumed charge as the 'Head of the State' of the world's small country, Vatican with a population of around 800 people spread over 0.44 sq. km.

Born in Buenos Aires, Argentina and of Italian descent, Bergoglio worked briefly as a chemical technician before entering the seminary; he was ordained in 1969. From 1973 to 1979, he was Argentina's Provincial Superior of the Society of Jesus, became Archbishop of Buenos Aires in 1998, and was created cardinal in 2001. Bergoglio is the first Jesuit pope, the first pope from the Americas, and the first pope from the Southern Hemisphere.

Throughout his life, both as an individual and as a religious leader, he is known for his humility, his concern for the poor, and his commitment to dialogue as a way to build bridges between people of all backgrounds, beliefs, and faiths. Since his election to the papacy, he has displayed a simpler and less formal approach to the office, including a decision to reside in the Vatican guesthouse rather than the papal residence used by his predecessors since 1903.

A majority of the popes were Italians. But with Francis' appointment, the tide could be shifting towards outside Europe.



In his first public act as pontiff, Pope Francis broke with tradition by asking the estimated 150,000 people packed into St. Peter's Square to pray for him, rather than give his blessings to the crowd first.

The pontiff broke with another tradition by refusing to use a platform to elevate himself above the cardinals standing with him as he was introduced to the world as Pope Francis.

Pope Francis opposes same-sex marriage and abortion, and this is not surprising as leader of the socially conservative Catholic church. The new Pope also faces another challenge of finding ways of working with shifting viewpoints among Catholics. In the United States, for example, 90% of Catholics use contraception and 82% think it is morally permissible.

PreSense prays for the successful tenure of the new Pope Francis.

***By K Srinivasan, Editor in Chief, PreSense
Source: March 2013 issue of ezine PreSense***

The Parliament House



The Parliament House is one of the most magnificent buildings in New Delhi and has one of the brightest clusters of architectural gems possessed by any country in the world. The building was designed by two famous architects – Sir Edwin Lutyens and Sir Herbert Baker – who were responsible for the planning and construction of New Delhi. The Parliament House is a massive circular edifice, 560 feet (170.69 metre) in diameter.

Its circumference is one-third of a mile and it covers an area of nearly six acres (24281.16 square metre). The open verandah on the first floor is fringed with a colonnade of 144 creamy sandstone columns, each 27 feet (8.23 metre) high.

The Chamber of the Lok Sabha is semi-circular in shape with a floor area of about 4800 square feet (446 square metre). The Chair of the Speaker is placed conspicuously at the

centre of the diameter connecting the two ends of the semi-circle. In the pit of the Chamber just below the Speaker's Chair is the table of the Secretary-General of the House. The Chamber has a seating accommodation for 550 members. In the wood work around the Lok Sabha Chamber, there are 35 gilded designs representing the various Provinces of Undivided India, the Dominions and certain other British Settlements.

***By K Srinivasan, Editor in Chief, PreSense
Source: April 2013 edition of Ezine PreSense***

Role of RSS in the General Elections 2014

RSS Involvement in Elections



Dr Mohan Bhagwat, Chief of RSS

Recently, Ram Madhav, a senior leader of Rashtriya Swayamsevak Sangh (RSS) confirmed to the media, of their involvement in the recent Parliamentary Elections to make Narendra Modi the Prime Minister.

Generally, RSS does not compete in the elections and does not share power. Ram Madhav further confirmed that this was the second time that RSS had wholeheartedly involved their cadre in the election strategies. Prime Minister Narendra Modi confirmed the active involvement of RSS in his victory. When Indira Gandhi imposed emergency in 1975, RSS was banned and more than 10,000 RSS workers were arrested. During the 1977 General Elections, RSS worked at the ground level to defeat Indira Gandhi. During that time, the Janata Party won 345 seats out of 543 seats and formed the Government. Though RSS is an apolitical organisation, they involved their cadre to restore democracy in 1977, Ram Madhav said.

After 26 years, RSS involved their cadre again to bring a change of Government, when the nation was facing large scale corruption, policy paralysis and lack of leadership. The Congress made public statements that the electoral fight was between Congress and RSS. Interestingly, NDA won 336 seats in the Lok Sabha. RSS is known to work from behind and without publicising their achievements, however significant they might be.

RSS – Background

RSS was founded by Dr Keshav Baliram Hedgewar in 1925 with the intention of promoting the concept of a united India and to promote indigenous ideology. They drew inspiration from social and spiritual leaders like Swami Vivekananda, Vinayak Damodar Savarkar and Aurobindo. Their cadre was also active during the freedom movement.

RSS conducts a daily one-hour '*Shakha*' (training) of yoga, physical exercise and games for their members to develop their spirit of nationalism and patriotism. It is reported that around 5,500 full-time workers (*pracharaks*) manage the RSS. Atal Bihari Vajpayee, L K Advani and Narendra Modi started their public service as *pracharaks*. It is also estimated that around 50,000 *shakhas* are held every day throughout India, with the participation of nearly 800,000 to 1,000,000 volunteer members, belonging to various castes and professions, without any discrimination of status.

The RSS network has more than 30 sister organisations, viz. *Sangh Parivar*, which includes the political wing BJP, India's largest trade union *Bharatiya Mazdoor Sangh* (11 million membership), India's largest student union, *Akhil Bharatiya Vidyarthi Parishad* (ABVP with 2,200,000 members), *Vidya Bharathi* (running 13,500 schools with 3 million students), *Bharatiya Kisan Sangh* (2 million members), *Muslim Rashtriya Manch* (1 million members), *Vanavasi Kalyan Ashram* and many others. RSS spreads the message of patriotism and nationalism in all the districts of the country through these organisations.

The current chief of RSS (*Sarsanghchalak*) Dr Mohanji Bhagwat is the 7th chief after the launch of RSS and he is the mentor for all the *Sangh Parivar* organisations.

Rescue Operations during Crises

The RSS cadre is known for its rescue operations during disaster situations like the Bhuj earthquake in 2001, Tsunami in 2004 and the Uttarakhand disaster in 2013.

In 1962, the then Prime Minister, Pandit Jawaharlal Nehru had requested RSS to assist the Government in various assignments during the Sino-Indian War. As a gesture of goodwill, in 1963, Pandit Nehru invited RSS to participate in the Republic Day parade at New Delhi. Again in 1965, during the Indo-Pak war, RSS was requested by the then Prime Minister, Lal Bahadur Shastri to take care of the law and order and the traffic in Delhi, so that the policemen could be spared for war duties. Even during the 1971 Indo-Pak war, RSS cadre helped the authorities to maintain law and order in various states.

When Gandhiji visited a 1500-strong RSS camp at Wardha in 1934, he was pleasantly surprised to find that the *Swayamsevaks* were not even aware of the castes of one another, not to speak of any ideas of untouchability. The visit left such a deep impression on Gandhiji's that he referred to it even thirteen years later.

Controversy

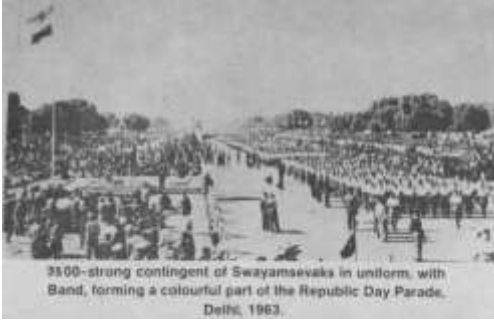
The RSS, with its paramilitary style of functioning and its emphasis on discipline and nationalism, is sometimes seen by some as "an Indian version of fascism". When Mahatma Gandhi was assassinated in 1948 by Nathuram Godse, an ex-member of RSS, the Nehru Government banned RSS for the first time in February 1948. The Justice Kapur Commission was set up to enquire into the murder of Mahatma Gandhi.

Justice Kapur observed that RSS was not responsible for the murder of Mahatma Gandhi. The Government lifted the ban in July 1949 with the condition that RSS should adopt a constitution.

RSS was again banned in 1975 during Emergency and the ban was lifted in 1977.

Confused Perception about RSS due to Lack of PR

RSS, as a matter of policy, does not display any reaction to bouquets or brickbats. Thus, even misleading and wrong information about RSS go undefended. This leads to confused perceptions about it.



Even for writing this article, I had to struggle to get information as they do

not have any professional Public Relations set-up to share their positive achievements and services to the nation.

***By K Srinivasan, Editor In Chief
Source: May 2014 issue of Ezine PreSense***

Circumspection and Silence Go Together in Governance

Effective communication can take place without sound or gestures; and, silence, used wisely, could be more eloquent. To quote Keats: "Unheard melodies are sweeter" (*'shruta gana abhirama, ashruta gana abhirama tarām'*). While decision-making through loud sound-bytes has become the



P V Narasimha Rao

political norm, employing the art of silence as a communication weapon is rare and criticised. The former Prime Minister, Narasimha Rao used this weapon very effectively and received his share of criticism from the more vocal communicators.

Ever circumspect that he was, he cautioned against creating hype about the mere fact of his cabinet giving nod to any new proposal. His advice was that when the proposal got implemented, it would create its own communication.

Sometimes by not expressing any opinion on an item coming up before the cabinet and deferring the subject, Rao would signal a powerful message.

The finance ministry was keen to drastically cut most of the government subsidies, including the subsidy to food grains supplied through the ration shops. This was at a time when there were misgivings within the ruling party over liberalisation. There were demands to strengthen the social safety net for protecting the people affected by changes in the economic policy.

Every time the proposal to increase the price of food grains issued through ration shops came up before the cabinet, without a word Rao would shift to the next agenda item.

Through this stratagem, he avoided a political storm within and outside his government. Economic liberalisation was not a popular issue within his own party as well as a section of the private business. Without picking up a fight with them, he quietly allowed the loosening of bolts and nuts holding the weight of state control over economic activities. When these started bearing fruit, liberalisation won many votaries.

He preferred action to words. Here is an example: the minister in charge of power sector excitedly rushed to him with an announcement in 1994 that a Hong Kong-based tycoon offered to sign a MOU with India for generating 10,000 MW. Rao's suggestion to the minister was to sign the MOU but let the foreign tycoon make the announcement along with its details. The minister preferred the sound byte.

And nothing more was ever heard about this MOU. (Gestation time of power projects is long and people feel their impact over time. In the meanwhile, the short term pains to be endured by power consumers are many. Therefore, in Rao's view merely announcing an MOU was not enough. If a private party makes the relevant announcement, it would be held accountable rather than the government. The latter's announcement of MOU could be used for manipulating the company share market).

In 1996, almost at the end of its term, the government took an in-principle decision to buy Sukhoi fighter jets from Russia that would put the Indian air force on par with neighbours having American F-16 fighters. This was a significant decision taken on the election eve and many of his colleagues wanted the government to make an announcement to derive political mileage. Rao was not in favour, and security issue was not the only reason. The deal involved payment of an advance and other procedures, including approval of the deal by the successor government after the poll. Actual induction of these fighters was a long way off. He was prepared to forego the temporary political advantage in order to protect the deal. As and when these Sukhois took to the skies flying the Indian tri-colour, the message was very clear.

The scamster, Harshad Mehta had announced through a press conference that he had delivered a sum of one crore rupees in a suit case to Rao at his high security official residence. The media went berserk. Party colleagues, sycophants and civil servants rushed to advise him to issue an immediate denial. Rao's reaction: "Don't hustle me. A crook has made the allegation. Onus of proof is on him'. More than 24 hours elapsed before releasing an official denial.

In contrast to this, in the Bofors' Howitzer gun controversy, the government came out with an immediate denial barely a few hours after the Swedish radio alleged that there was a payoff to middle- men contravening the contact terms. Buying time through silence for getting facts and assuring people that the government was concerned and would get to the bottom of the developing scandal could have saved it the ensuing embarrassment. Circumspection and silence mix like salt and pepper to make any communication more palatable and prevent the possibility of one having to eat one's own words.

By S Narendra, Former Information Advisor to Prime Minister

Source: June 2009 issue of Ezine PreSense

Milestones of 'Right To Education Act'



Indian Constitution –Article 45 states:

"The State shall endeavour to provide, within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years "

Amendments

Following initiatives by the Supreme Court of India during the 1990s the Ninety-third amendment bill suggested three separate amendments to the Indian constitution:

The constitution of India was amended to include a new article, 21A, which read:

"The State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the State may, by law, determine."

Article 45 was proposed to be substituted by the article which read:

"Provision for early childhood care and education to children below the age of six years: The State shall endeavour to provide early childhood care and education for all children until they complete the age of six years."

Another article, 51A, was to additionally have the clause:

"...a parent or guardian [shall] provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years."

The bill was passed unanimously in both Lok Sabha and Rajya Sabha in 2001 and 2002. After the approval by the President of India, it became the 86th amendment. Since then those between the age of 6–14 have a fundamental right to education.

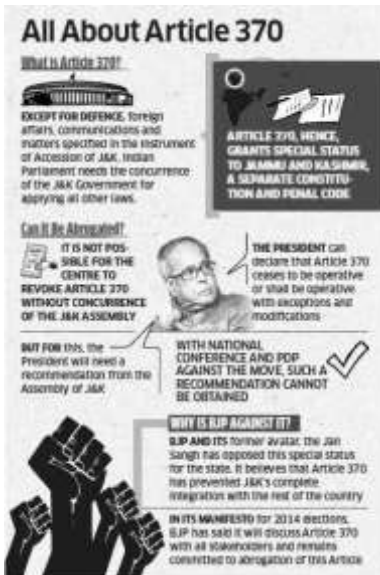
Passage of Bill and implementation

A draft Education Bill was released in 2005. It received opposition, as it contained a mandatory provision of 25% reservation for disadvantaged children in private schools. Both the Houses passed this Bill in July and August 2009 and President approved this bill in Sep 2009. This historic law came into effect on 1st April 2010 with a speech by the Prime Minister of India.

Source: July 2010 issue of Ezine PreSense

The Ado about Article 370

The Minister of State in the Prime Minister's Office (PMO), Jitendra Singh stirred up a controversy recently by talking about initiating a debate on Article 370 of the Indian Constitution, which grants special status to the northernmost state of Jammu and Kashmir. This seemingly off-the-cuff comment has fuelled a debate on the sensitive subject, both in the media and on political platforms. It may be recalled that when the Bharatiya Janata Party held its rally in Jammu during December 2013, its then prime ministerial candidate, Narendra Modi, had called for a debate on Article 370.



Graphics courtesy: Economic Times

Reasons for Article 370

It is pertinent to know the genesis of, and understand the reason for Article 370. When India and Pakistan gained their national independence on August 15 and 14, 1947 respectively, Jammu & Kashmir chose to remain independent. Maharaja Hari Singh, the then ruler of Jammu & Kashmir, signed a standstill agreement with Pakistan. India refused to sign any such agreement. In October, 1947, Pakistani Muslim tribes attacked the Maharaja and the people of Jammu and Kashmir. To save his state from invasion, the Maharaja chose to accede Jammu & Kashmir to India, so that India could help in defending him. It was in the pursuance of those commitments that Article 370 was incorporated under Part XXI of the Constitution of India, which deals with "Temporary, Transitional and Special Provisions". Article 370 was worked out in late 1947 between Sheikh Abdullah, who had by then been appointed the Prime Minister of Jammu &

Kashmir by Maharaja Hari Singh, and the then Prime Minister of India, Jawaharlal Nehru. Interestingly, Sheikh Abdullah had then argued that Article 370 should not be placed under 'temporary' provisions of the Constitution. He wanted 'iron-clad autonomy' for the state, which Centre did not comply with.

Dr Ambedkar opposed this Article 370 and refused to draft the article

It is interesting to note that Dr Ambedkar, the architect of Indian Constitution, refused to draft this Article 370 and it was drafted by Mr Gopalaswami Iyengar a State Minister. Dr Ambedkar is reported to have told Sheikh Abdullah, *"You wish India should protect your borders, she should build roads in your area, she should supply you food grains, and Kashmir should get equal status as India. But the Government of India should have only limited powers and the Indian people should have no rights in Kashmir. To give consent to this proposal, would be a treacherous thing against the interests of India and I, as the Law Minister of India, will never do it "* (Ref: wikipedia.org)

Implications of Article 370 on India and J&K

Article 370 was intended to provide space, in matters of governance, to the people of a state who felt deeply vulnerable about their identity and insecure about their future. The state of Jammu & Kashmir was thus accorded special autonomous status. All the provisions of the Constitution which are applicable to other states are not applicable to Jammu & Kashmir. For example, till 1965, Jammu & Kashmir had a *Sadr-e-Riyasat* for Governor and a Prime Minister in place of Chief Minister. Besides, except for defence, foreign affairs, finance and communications, the Parliament needs the State Government's concurrence for applying all other laws. Thus the state's residents live under a separate set of laws, including those related to citizenship, ownership of property, and fundamental rights, as compared

to other Indians. Indian citizens from other states cannot purchase land or property in Jammu & Kashmir.

Under Article 370, the Centre has no power to declare financial emergency under Article 360 in the state. It can declare emergency in the state only in case of war or external aggression. The Union Government can therefore not declare emergency on grounds of internal disturbance or imminent danger unless it is made at the request or with the concurrence of the State Government.

Article 370 was included in the Constitution on a temporary provision and should have been gradually abrogated. This has not happened in the past sixty years. One asks why a state of the Indian Union should have a special status. It conveys a wrong signal not only to the resident Kashmiris but also to the separatists, to Pakistan and indeed to the international community that Jammu & Kashmir is yet to become an integral part of India. One is convinced that Article 370 has done little to integrate the state of Jammu and Kashmir with the rest of India.

Is it possible to revoke Article 370?

Can Article 370 be revoked unilaterally? Clause 3 of Article 370 states that the President of India may, by public notification, declare that this Article shall cease to be operative, but only on the recommendation of the Constituent Assembly of the State. In other words, Article 370 can be revoked only if the Constituent Assembly of Jammu and Kashmir is convened and is willing to recommend its revocation. The Parliament has the power to amend the Constitution to change this provision. But this could be subject to a judicial review which may find that this clause is a basic feature of the relationship between the State and the Centre, and hence not for review by it.

As one of the most debated and discussed articles of the Constitution, Modi's suggestion of a debate, followed by Jitender Singh's reiteration, has brought the issue of this provision in the limelight once again.

To read full text of Article 370 of the Indian Constitution, please visit

http://www.jammu-kashmir.com/documents/jk_art370.html

***Compiled by Susan Koshy, Editor
Source: May 2014 issue of Ezine PreSense***

The Economic Makeover of India - 1991 Economic Liberalisation Policy

July 24, 1991 is a landmark date in the history of the Indian economy. India instituted a series of economic reforms known as the Economic Liberalisation Policy of 1991. This happened at a time when India was at the brink of economic collapse and a severe balance of payments (payments for export and import of goods, services and capital) crisis. The country was unable to pay off essential imports, and had to borrow heavily from external sources to finance the resulting deficits. Inflation was rampant.

There were several other factors that contributed to this unwelcome state, tracing down from the early post-independence era. India drove a centralised economic planning model (inspired by the Soviet Union), in place of distributing controls.

A natural outcome of this policy was extensive bureaucracy, red tape, unnecessary regulations and trade barriers. Although these socialist reform measures were meant to alleviate poverty, the opposite happened. India faced food shortages and mass starvation; farmers struggled to meet the agricultural production needs and industrialists suffered from the grip of the *License Raj* (Government control). The state intervened in industrialisation, businesses, labour sectors and the financial markets, leading to a huge public sector. Since independence, India had only been able to maintain a growth rate of 3-3.5%; the capital growth rate was even worse, at around 1.3%. It compared poorly even among some of the other developing countries with similar independence timelines.

The wars of 1962, 1965 and 1971 drove up the defence spending, causing further strain to the economy. India also relied on import for some essentials as oil. India dealt with the deficit in the worst possible way - borrowing from external sources to finance the deficit. During 1980-1985, half of India's external financing needs were met with outside assistance. External debt grew to as much as 38.7% of the

GDP in 1991-1992, culminating in the Balance of Payments crisis. The then Prime Minister had to pawn India's gold as collateral for IMF (International Monetary Fund) bailouts.

With just three weeks left to completely depleting the last loan from IMF, Narasimha Rao took over as India's Prime Minister and announced India's Economic Liberalisation Policy. He appointed Dr Manmohan Singh as Finance Minister. The goal of his visionary policy was to remove unnecessary bureaucratic controls, take measures to integrate India with the world economy, remove restrictions on foreign investments and crack down on public sector enterprises that yielded very low returns. The Indian Rupee was devalued. Industrial licensing was abolished. The Monopolies and Restrictive Trade Practices (MRTP) Act (that protected businesses from monopolies) was reformed, enabling competitive and productive industries. All industries (barring two) were opened to the private sector. There was gradual reduction of import duties, encouraging foreign investments to flow in. More clearance was given to capital goods. Taxes (income and corporate taxes) were lowered.

How much has India changed as fallout of the 'makeover' of 1991? India's GDP which was Rs.10.8 lakh crore (10.8 trillion) in 1991 quadrupled by 2011 with GDP at Rs.48.8 lakh crore (48.8 trillion); its forex reserves rose from USD5.8 billion in 1991 to USD274 billion in 2011. India boasts of exports' surge from USD 18 billion in 1991 to USD 245 billion in 2011.



Architects of 1991 Economic Liberalisation Policy: P V Narasimha Rao (Prime Minister) and Dr Manmohan Singh (Finance Minister) in 1994

It is pertinent to mention here that as per the principle of economics, when a particular sector performs disproportionately higher than the average growth rate, economic wealth starts concentrating in that sector. In the case of India, it is the service sector. Within this sector, the highest growth is marked by sectors such as financial services and real estate services, etc. which are least employment elastic. Consequently, growth in the past decade in India was limited to upscale areas of the country as almost the entire service industry operates from these areas. This accelerated migration to urban areas, creating an array of social problems associated with urbanisation. It also changed the pattern and lifestyles of the Indian society. Now we have the ultra-modern and the ultra-primitive societies co-existing and conflicting with each other.

What we have learnt from the past 25 years is that unless we have a crisis, we might not see big bang reforms. We may have incremental reforms that are politically palatable. The present Prime Minister appears to be focusing on fixing some of the architecture that is required for long-term positive change – making government accountable, clamping down on corruption and stimulating entrepreneurship and, hopefully, developing the much-needed infrastructure.

Time will tell how and where India will be propelled towards, in the next 25 years under the present and future legacy. The people of India are hopeful that it would be towards a more balanced and healthier economy that ultimately benefits the common man on the streets of India and the farmers in the fields of its rural landscape. For this, there needs to be inclusive participation of both the government and the entrepreneur, especially in the implementation of the roadmap towards India's development and progress.

By Susan Koshy, Editor
Source : July 2016 issue of Ezine PreSense

US Government Shutdown – What It Means?

The expression “When America sneezes, the rest of the world catches a cold” was probably coined as an adage during the cold war days (beginning in the '60s) to imply that if the US foreign policy or its economy or its international trade took a tail spin, it would impact the world globally, since America has dominated foreign policy and world trade for decades.

So, when the US shutdown happened in mid-January this year (2018), the world shuddered as it did during the Lehman Brothers' collapse that triggered the global recession. But thankfully, it has remained an internal situation.

What is US Shutdown?

First, let us understand what the US shutdown is, and what it means domestically to that country. To understand it better, let us first understand the policy closer home in India. Here, when a ruling party government fails to pass a money bill, particularly the budget, to allocate money to different sectors and to appropriate salaries to government employees in the lower house of the Parliament, the government falls and the election process is set in motion for a new government to come out with a new budget. In the interim, the caretaker government adopts a 'Vote on Account' with the support of the opposition, to draw monies from the treasury to pay out. India follows the British model of bicameral legislature and legislative proceedings, which have enough built-in safeguards.

USA follows a presidential form of government where there is the Congress and the Senate, with the President as the final authority. But his authority can be questioned and at times, he can be impeached by the Congress.

A government shutdown occurs in USA when the Congress fails to pass and/or the President fails to sign the appropriation bill – the legislation funding government and

agencies. In such a case, interpretation of the Anti-Deficiency Act requires that the federal government begin a "shutdown" of the affected activities, involving the furlough (*i.e. placing an employee in a temporary non-duty, non-pay status, in this case because of lack of funds*) of non-essential personnel, and curtailment of agency activities and services.

In the Past

Since 1976, when the current budget and appropriations process was enacted, there has been 19 gaps in budget funding, eight of which led to federal employees being furloughed. Prior to 1990, funding gaps did not always lead to government shutdowns, but since 1990, the practice has been to shut down the government for all funding gaps. Shutdowns have also occurred at the state/territorial and local levels of government.

Under President Ronald Reagan's administration, there were three funding gaps leading to shutdowns lasting one day or less. A funding gap in 1990 during the George H W Bush administration caused a weekend shutdown. During the Bill Clinton administration, there were two full government shutdowns leading to furloughs and significant disruption, during 1995 and 1996, lasting 5 and 21 days respectively. During the Barack Obama administration, a government shutdown occurred during October 1–16, 2013. The Republicans' desire to delay or defund the Patient Protection and Affordable Care Act, more popularly known as Obamacare, brought out by then Democrat President Obama, led to the shutdown.

Why the Present Crisis?

How US Senate voted for closure (60 votes needed for pass) on 18 th Jan 2018			
Party	Voted for	Voted against	Not voted
Republican (51)	45	5	1
Democratic (47)	5	42	
Independent (2)		2	
Total (100)	50	49	1

Therefore, the recent US government shutdown under President Donald Trump during January 20-23, 2018, was not a new phenomenon (though it was the first since October 2013). It is just history repeating itself. Differences between the Democrats and the Trump-led Republican regime over the passage of an amended Immigration Bill led to a tussle between the two parties with the Democrats adopting filibustering action, blocking the passage of the Bill and preventing the House from adopting the appropriation bills to sanction money to government departments.

Essential services are normally exempted, so they continue in service, but they would not be paid until the shutdown ends. Essential services would include, for example, the armed service personnel as well as the federal government employees, some of whom would still be required to report to work but would not be paid until the government reopens.

Government shutdowns have the effect of disruption to government services and increased cost to the government due to lost labour. During the 2013 shutdown, Standard & Poor, the financial rating agency, estimated that that the shutdown had "to date taken \$24 billion out of the economy," and "shaved at least 0.6 percent off annualized fourth-quarter 2013 GDP growth." The shutdown in October 2013 lasted more than two weeks and more than 800,000 federal employees were furloughed. There is no official tally on how many were off work this time.

Will It Affect India?

Does or did the American shutdown affect India in any way? Here is the take. Indian shipments to the U.S. are likely to get affected following the shutdown of that country's Federal Government, exporters claimed. "The shutdown of the U.S. Federal Government is certainly bad news for the Indian exporters since the American economy is among the largest destinations for (India's) exports," Ravi P Sehgal, chairman,

EEPC India — the apex body for Indian engineering exporters, was quoted in the media as saying.

"For the (India's) engineering sector, the U.S. is the number one export destination, giving a robust growth in the current financial year. During the April-December period of the current fiscal, (India's) engineering exports to the U.S. grew by over 50% to \$7.5 billion," Sehgal said in a statement. With as many as 60,000 employees of the U.S. Commerce and Transportation Departments being furloughed, port operations as also the clearing (of shipments) would be hit, he said.

Global Reaction

While the shutdown at the time of writing was almost resolved, the Republican administration was bracing itself for another potential shutdown in February 2018 as Democrats are in no mood to allow the Trump-led administration to conduct government business unless their demands are conceded to. Of particular concern for the Democrats over the Immigration Bill, is the fate of 700,000 children who had migrated to USA over the last decade, and Republicans worry of legalising illegal entry and incurring the wrath of the voters.

The American shutdown did not impact global business as feared but drew criticism from some European and Asian countries such as Britain, France and China. Even Mexican newspapers criticised the shutdown as an inherent defect in American style of governance. The French media criticised it. China was the first to react, calling the American political system flawed.

Anyway, the latest American shutdown has drawn more global attention than ever before because of antipathy from most countries to President Donald Trump Administration's 'America First' Policy construed as an action of protectionism. The policy was criticised by Indian Prime Minister, Narendra Modi recently at the WEF (World Economic Forum) meet at Davos in Switzerland. China too supported India in the

criticism. Modi said that protectionism in a global village was as bad as terrorism.

***By T.N.Ashok, Consulting Editor
Source : Jan 2018 issue of PreSense***

Ethics in Politics – Role Model in Canada

When we talk about politics, the clichés that most often go with the word, are 'dirty' and 'corrupt'. Politics and



The Parliament of Canada

politicians as well as the Government most often mean power, where "power corrupts, and absolute power corrupts absolutely". And this is a universal impression.

Against this background, when the PreSense Editorial Team met up with Mr Ranjith Narayanasamy, a political volunteer from Canada and discussed about the quality of politics in Canada, the information shared by him was enlightening. Ranjith is a registered Professional Engineer who has also been associated with several political campaigns in Canada over the past decade at federal, provincial and municipal levels. Ranjith shared about how Canadian politics is transparent and how Canadian politicians hold the highest level of dedicated service and integrity in their public life through its open and transparent political system. He highlighted the following points that have facilitated the practice of integrity and high standards of morale in public servants of Canada:

- 1) A professional and non-partisan federal public civil service is an integral part of the Canadian democracy. Civil service is professionally run and is not just government

appointments. The civil servants do not change with change of the government.

2) Civil servants follow a high legal and ethical standards. Over the past century, this practice has become ingrained in the Canadian political culture.

3) All expenses of the Members of Parliament (MPs) and Members of the Legislative Assembly (MLAs) are in the public domain and under scrutiny all the time. If any expense is deemed inappropriate as public expense, the MP, the MLA or the minister is asked to reimburse those expenses to the public coffer.

4) The control/monitoring system followed in the Canadian political system to ensure that high standards of integrity and morale are followed is the *Open and Accountable Government*. It sets out core principles regarding the roles and the responsibilities of the ministers in Canada's system of responsible parliamentary government.

5) On the critical issue of ethical conduct, the ministers are expected to be thoroughly familiar with and adhere to the contents of the *Conflict of Interest Act*.

6) The Conflict of Interest Bill also provides for an annual declaration of the private interests of senators, Members of the House of Commons, their spouses and dependent children to an independent three-member Conflict of Interests Commission. Penalty for non-compliance ranges from fines to loss of the Member's or Senator's seat.

7) Canada has an independent Ethics Commissioner who can provide advice to the Members of Parliament and is also enabled to adjudicate alleged breaches of ethics.

8) The Canadian Elections Body which oversees all federal elections, is also empowered to receive information and impose penalties for breaches of conduct and transgressions that do not conform to the Elections Act.

9) The *Parliament of Canada Act* prohibits a member from receiving outside compensation for services rendered on any matter before the House, the Senate or their committees. Pursuant to that Act, a Member found guilty of such an offence is liable to a fine and is disqualified from being a Member of the House of Commons and from holding any office in the public service of Canada for five years after conviction for that offence.



Ranjith Narayanasamy

In addition, the *Criminal Code* provides for 14 years' imprisonment for a parliamentarian who accepts or attempts to obtain any form of valuable consideration for doing or omitting to do anything in his or her official capacity.

10) The corruption issues are addressed by dedicated committees appointed for the purpose and the process is followed ethically.

11) The public has access to full disclosure on any public issue. The Freedom of Information Act is very powerful in Canada.

When asked if India could learn from Canada, and aspire for a corruption-free system, Ranjith believed that India could learn lessons from Canada, especially about an inclusive society, accommodating diversity with open arms. In Canada, every citizen is equally eligible for similar services irrespective of their caste, creed, religion or economic background. There is no queue-jumping or special privileges in its government system. Ranjith feels that the real key is to encourage the media to look for corruption.

The Indian public has to be educated to realise that corruption leads to poor decisions. Once corruption is seen as unacceptable by a majority of the voters, change becomes easier. If corruption is accepted as a "normal" way of doing

business, it is hard to implement a major change. Incidentally, Ranjith observes that in Canada, most of the leaders are young and university-educated. All candidates seeking political office at any level of government have to understand the law and rules around election funding and personal integrity.

In conclusion, when one compares the political, social and legal provisions of India with Canada, one will find that India is equally well-equipped in its legislatures, norms, rules and penalties to deter corruption. If corruption persists in spite of it, the lacuna is in the lack of intent among its public and government servants. Proper education of the majority of its people is also critical so that they can understand the implication of the election system and governance, their impact on the masses, and their role and responsibility in making it work. Success in transforming India into a corruption-free country and society can happen only if there is an equally strong positive intent, implementation and practice of the standards and norms spelt out in the legislatures, laws and rules of the country.

by Susan Koshy, Editor-in-Chief
Source: March 2018 issue of PreSense

CSR Taking Wings in India



The passing of Companies Act, 2013 in a way acted as a bridge between companies and communities in need, in India. This landmark Act benefitted millions who were in need and mustered Corporate Social Responsibility (CSR) as an industry in itself.

Although it is a mandatory expense on the part of corporates, they do not complain. Today, we see many corporates in the country coming forward to help communities in need. The companies which are eligible to do CSR are enthusiastically creating their own CSR structure and developing their own plans to benefit the society.

The important point to note here is that the companies should strictly undertake their CSR activities as prescribed under the Companies Act, 2013. There were many cases where the good work done by certain companies to help the needy communities was not considered as CSR as it did not fall under the purview of Companies Act, 2013.

CSR is not just about giving donations or performing charity after making profits. It is about companies doing their business in a responsible manner. It is about giving back to the society, protecting the environment and leaving a footprint for the next generation, to lead a peaceful life.

According to Companies Act 2013, CSR is mandatory for all corporates having a turnover of Rupees 500 crores (5 billion) or more, Rupees 1000 crores (10 billion) of investment or Rupees 5 crores (50 million) net profit, ie. profit after taxes. Eligible companies should spend 2% of their net profit on CSR. It is applicable to listed, public and private limited companies and also public sector undertakings.

Companies should constitute a committee consisting of three directors of the Board, (out of which one should be an independent director). CSR implementation should be reported to the statutory authority in a format called Business Responsibility Report (BRR). This document is to be attached as annexure to the annual report for circulation to all stakeholders and posted on the company's website.

For the Greater Good
A Formal Framework for Social Spending by Corporates

WHEN	WHO	WHERE
From April 1, 2014	Companies with net worth of over ₹500 crore or turnover of over ₹1,000 crore or net profit of over ₹5 crore	CSR activities will have to be within India
HOW MUCH 2% of average profit of previous three years Profits from overseas branches and dividends from other cos not included in net profit for calculation	Foreign cos registered in India included	

In terms of Sec 135 Schedule 7 of Companies Act 2013, there are several categories to do CSR. Activities which fall

under the CSR purview under the Act are Promotion of Education, Eradication of Extreme Hunger and Poverty, Gender Equality and Women Empowerment, Reducing Child Mortality and Improving Maternal Health, Combating HIV-AIDS, Malaria and Other Diseases, Environmental Sustainability, Social Business Projects, Contribution to Prime Minister's Relief Fund and Other Such State and Central Funds, Employment Enhancing Vocational Skills, and such other matters as may be prescribed.

There was a marked increase in the average CSR expenditure by the firms in 2012-13 after the passing of the section regarding CSR in the Companies Act in August 2013.

The passing of the Act also led to a steep rise in the number of firms disclosing their CSR expenditure. In 2010-11, 336 firms disclosed their donations and expenditure on community and environment related activities. This number rose to 504 in 2011-12, and to 1,470 in 2012-13.

In 2012-13, 760 firms had crossed the threshold of Rupees 5 crore net profit, but their total CSR contribution was lesser than the 2% criterion as laid down by the Act. The total CSR spending by firms was Rupees 33,668 million, when the required spending was Rupees 45,154 million.

There are stringent penalties for companies not disclosing their CSR spends. Companies can be fined a sum not less than Rupees 50,000 and up to Rupees 25 lakh (2.5 million). Company officials who default can face imprisonment which can go up to three years or be fined from Rupees 50,000 to Rupees 5 lakh (500,000).

NGOs can help corporates which do not have their own CSR Team and Foundation, to execute CSR projects. NGOs can act as an implementing partner or form a consortium of agencies.

The corporates themselves can undertake CSR by registering a separate company under Sec 8 of Companies Act 2013 to take up the CSR activities. The amount should be spent

fully in the succeeding financial year and it cannot be carried over. Any income generated should be used for the CSR activity itself.

Penalty will be levied to the companies if they do not spend the amount and if the reasons thereof are not valid. If NGOs misuse the funds, the corporate can take legal action against the NGO.



CSR Obligations for MNCs

Multi-national companies (MNCs), operating in special economic zones, are exempted. If the MNCs have any holding company in India and if the holding companies operate in foreign countries, profits arising out of those locations are exempted.

Global Scenario

France, Denmark, South Africa and China have a mandatory reporting obligation on the amount spent on CSR activities. The United Nations has a significant role to play in the universal acceptance of the idea of CSR, with their promotion of the "Global Compact" to which various countries are signatories.

This global compact binds the signatories to universally accepted principles of social responsibility which the businesses in those countries ought to follow and which are tracked for implementation.

***By Shakthi Prasanna, Guest Writer,
with inputs from Mr. V N Premanand, Joint Secretary
and Faculty, Institute of Directors, Chennai Regional
Office***

The US-China Tariff War



(Source of Image: Times Now)

News of a trade war between the American President, Donald Trump and the Chinese President, Xi Jinping has been doing the rounds in the media, especially in the past few months. Trump has been alleging unfair trade balances between USA and China, and in his attempt to fix China's "long-time abuse of the broken international system and unfair practices" as promised in his election campaign, has imposed higher tariff on Chinese imports to dissuade importers from the Chinese market, while Xi has retaliated with corresponding hikes in the US goods for China.

Recently, when the Japanese Foreign Minister appealed to the two countries to resolve the issue through negotiations instead of retaliatory actions, he also expressed the concern that besides the economies of the two countries, it was bound to impact other countries too. This statement has aroused curiosity among the onlooking people, about what this unusual warfare was about and what its background and implications were. Your e-magazine, PreSense has

attempted to bring about some clarity about the contentious issue in the following article, for the benefit of its readers.

The Bigger Picture?

The total business from China to US is US\$505 billion, while that from US to China is US\$127 billion. US is therefore the net importer by a great margin. US wants equal trade balance between the two countries. This might not be a feasible expectation as the types of products imported and exported between the two countries are different and essential for the respective countries. While US wants China to change its business model, it is believed that it is concerned about a more contentious issue - US wants China to respect intellectual property rights. In March this year, Trump accused the Chinese government of stealing intellectual property by forcing American companies to share their valuable secrets and sign joint venture agreements with local firms if they wanted to operate in China. The intellectual property rights in China are poor. Much of the technology US gives China is duplicated by China and sold back to US and to other countries at cheaper rates. Therefore, any product can be pirated/duplicated and in Hong Kong and Taiwan, any product is duplicated in 6 hours. US fears that in 5 years, with the well-trained personnel in China, China might take over the world trade in a dominant way.

Another matter of concern for US is the 'Made in China 2025', which is a strategic plan of China issued by Chinese Premier Li Keqiang and his cabinet in May 2015 in an attempt to move the country's manufacturing up the value chain and become a major manufacturing power with 40% of the world goods and 45% of the world business for itself, in direct competition with the United States.

The



Chinese President, Xi Jinping has proposed a major global project called the One Belt One Road (OBOR), also known as the Belt and Road Initiative (BRI). Its objective is to build trade routes between China and around 60 countries in Asia, Europe, Africa and Indo-Pacific littoral countries. China is thus hoping to become the gatekeeper for a new platform for international trade cooperation and integration.

The Tariff War

Coming back to the tariff war, in March 2018, Trump imposed a 25% duty on steel and 10% duty on aluminium imported from China. These are infrastructure goods. By imposing a higher tariff on Chinese goods, local steel and aluminium (made in USA) becomes cheaper for purchase by the American buyers. While the long-term impact of this move is yet to be known, it is feared that any hiked tariff will increase consumer cost and weaken the demand. Whatever tariff is imposed by America will have to be borne by the American consumers, thus increasing the inflation while simultaneously decreasing the demand.

More goods have been included under revised tariff from September 24th 2018. China is retaliating by imposing increased tariff on American imports. And the war continues.

Thus, we find that protectionism is being re-introduced in the two countries. Since 1995, world organisations as WTO (World Trade Organisation) has been promoting globalisation and reduction of protectionism for the benefit of all the countries, from the global perspective. But in May 2018, World Bank itself had come out with the statement that globalisation was not working.

When we look back, we find that over the years, there has been a migration from communism, to socialism, to capitalism, to globalisation. State communism (state owning the assets) has lost its relevance, with the German Wall coming down and Russia disintegrating. The bipolar world has migrated into a unipolar world. Meanwhile, capitalism has gone in a big way, and one of the factors in capitalism, is rising inequality. It is reported that a few big houses (corporates) own most of the world's overall wealth. The aggregate wealth of these big houses is humungous when compared to the assets even of the State. With the current tariff war, are we now taking a re-look into a new model?

Economists across the world seem to suggest that globalisation is unsustainable. The best way to restrict globalisation is to restrict imports by imposing quotas in the quantum imported. But how far is this practical? For example, when a country manufactures a garment, it has to import the zip from Taiwan, which is the only country in the world manufacturing it. It would be impractical to stop these imports. Countries are therefore, bound to be interdependent, at least to a certain extent.

Trump's latest strategy with China is not as per the WTO (World Trade Organisation) norm, which has a Dispute Resolution Mechanism. The matter about steel is being sold at cheaper prices, could have been escalated with WTO to resolve. Trump has resorted to imposing corrective steps himself as promised by him in his election campaign to bring

employment back to his American people. His latest move might create more employment in US in the short term but it is not expected to sustain in the long term.

Impact on India

While it remains to be seen how far the retaliatory tariffs between US and China will affect the other countries, it is bound to impact global growth and investments across borders. One possibility is that suppliers from across the world may dump their products into India (which is a large market), at lower prices because of the lowered global demand. This should benefit the importers. However, for the same reason, our exporters could face the brunt.

India's exports to USA is to the tune of US\$77 billion in the form of goods and especially of services, while its imports from USA is US\$50 billion. USA's protectionism especially in its visa policy is beginning to hit India adversely as Indians are finding it increasingly difficult to get their visas to work in USA. Even those already working in USA on projects as part of the services to USA, are not assured of renewed visas to continue working there. The current trade surplus that India enjoys with USA would then be hit.

For now, it is a watch-and-wait for the rest of the world as USA and China play out their respective moves in the current Game of Tariffs between them.

By Dr Prabhakar Krishnamurthy, Editorial Advisor
Source : Sep 2018 issue of PreSense

Why is the Judiciary Under Criticism?



Some recent judgements delivered by the Hon'ble Supreme Court of India has attracted unprecedented debates, not witnessed in the past. The social media is flooded with 'memes', teasing the judgements.

As per the 'Doctrine of Separation of Powers', the Legislature, the Executive and the Judiciary should maintain checks and balances, without overstepping into others' jurisdiction. People impose their faith on the judicial system as the saviour of last resort, when the other pillars of democracy fail to redress. That is the reason that people the world over, expect the judiciary to be beyond criticism.

A month ago, some judgements on nationally sensitive and important issues, were delivered by the Supreme Court. In the last decades, it was only the mainline media that used to comment or review the judgements of the courts, that too with restraint. With the emergence of the social media, people are posting their reactions and comments about the

judicial system and some of its rulings. This has increased the responsibility and prudence of the judicial system.

The recent judgement scrapping Indian Penal Code (IPC) Section 377, decriminalising homosexuality, though justifiable in the eyes of law, has attracted immense criticism in the public domain. Another important judgement scrapping IPC 497 has led to a peculiar situation, where if a married man has an illicit relationship with a married woman, it is legal, whereas if he marries her, it becomes illegal.

The recent Sabarimala Judgement scrapping the centuries-old religious practice of disallowing women inside the temple, has attracted protests in many parts of the country, particularly in the South. Similarly, the judgement restricting the window for bursting crackers for festivity to two hours, between 8 pm and 10 pm on Diwali festival day, has created confusion and dissent. In the South, Diwali is celebrated in the early hours of the morning from 4 am. It would be difficult for the police authorities to take action against the 'offenders', in the light of the revised judgement. Questions are being asked whether the judiciary can and should interfere about the methods of celebration of religious festivals.

In the case of the scrapping of IPC 377, the Supreme Court might have delivered the judgement to protect the rights of LGBT (Lesbian, Gay, Bisexual, Transgender). A majority of the public seems to feel that the Supreme Court is being influenced by media hype and the sensation aroused by a handful of activists promoting views and ideas from the western world.

People are also questioning the wisdom of the judges who deliver a series of judgements just before their retirement on superannuation, though they were pending for a long time. This appears to be the case with all the judges in India. Some senior advocates explain that it is due to the long pendency of litigations, and the fact that the judge who has once heard and reserved the judgement, has to deliver the

judgement. If it is not delivered, it leads to further dislocation. Therefore, long pendency of litigations seems to be the cause of the last-minute rush to clear cases.

In the case of retiring bank chairmen, powers for taking important decisions which have far-reaching consequences, are withdrawn from them three months before their retirement. A similar model can be considered for adoption by the courts in India. Judges could thus be prevented from delivering judgements which have far-reaching consequences, on the eve of their retirement. They should not be pressurised to prepare the judgements in the last leg of their term, to be delivered just before retirement.

Although the Supreme Court has clear guidelines about allocation of cases, it is understood that due to various reasons like long pendency of cases, and shortage of judges, such guidelines are not being implemented effectively. Recent media reports indicate that the new Chief Justice of India is viewing the issue of long pendency seriously and is taking steps to reduce last minute rush. He has advised all the judges across the country to avoid taking leave or availing the Leave Travel Concession (LTC) facility, or attending seminars during the working days, so that they can tackle the long list of pendency of cases in the courts.

It is strongly felt that courts should stay away from sensitive issues such as religious practices. In the case of *Jallikattu* (a bull-taming sports festival in Tamil Nadu), the Supreme Court faced a similar problem when it banned the sport, going against popular sentiments. Such judgements create law and order issues. The Supreme Court has the responsibility to ensure that the law and order situation is not threatened by their own judgements, and not expect just the State Government to ensure law and order in the fallout of the judgements.

Sabarimala is a cult by itself. The Supreme Court judgement has stirred an hornets' nest with political and communal ramifications. Many people in South India feel that the Supreme Court should not have intervened in the matter of

the centuries old religious practice, when many other more important and critical cases are pending for judgements. It was strongly opined that people who are familiar with the local socio-religious practices in Kerala, should have been consulted. This would have helped in avoiding the unwanted debate and apprehension in the minds of the public about the sensitive matter, leading to outburst of criticisms in the social media.

There is a feeling among the public that there should be 'judicial restraint' and not 'judicial over reach' under the guise of public interest litigation. Courts should examine the *locus standi* of the person or the association filing the litigation, especially if it has emotional and sentimental overtones. In this case of Sabarimala, the case was filed by an association of people, neither associated with nor devotees of the Sabarimala temple.

The temple is meant for worship by believers and those having faith in the deity. It cannot be treated as a tourist spot. All over India, every temple has its own worshipping methods and practices. Courts should refrain from admitting and passing judgements on cases involving traditional 'religious faith', whether such practices are legal or not.

by K. Srinivasan, Publisher and Mg. Editor
Source : Oct 2018 issue of PreSense

Lessons from the National Disasters

The Gaja Cyclone that occurred in early November 2018, devastated six districts of the Delta Region of Tamil Nadu State, leaving lakhs of people homeless. The Delta Region of Tamil Nadu, known as the 'granary of South India', is in shambles. Innumerable trees, including coconut trees that provided livelihood to families, have been uprooted. Around 3.5 lakh houses have been completely damaged. Nearly 5,000 cattle have been lost. Many boats of fishermen have been destroyed, depriving them of their sole means of livelihood. It is estimated that it would take 5 to 10 years for the people to return to normal life. More than 1 lakh electric poles have been damaged, causing disruption in power supply for 10 days.

Fortunately, loss of life was minimal due to preventive measures taken by the Tamil Nadu Government. A team from the Central Government has assessed the intense damage caused in the Delta Region. A study by the Anna University estimates the damage caused to the Delta Region as greater than that caused by Tsunami in 2004.

Sadly, in spite of the huge devastation of the fertile Delta Region, the national media has not focused enough on this catastrophe in their news coverage. These national channels seem to find some less critical issues occurring in and around

Delhi, more important than that about the affected Delta Region. Is it necessary to remind them that India extends down south upto Kanyakumari?

During the past four months, India faced severe disasters in the states of Kerala, Odisha, Andhra Pradesh and Tamil Nadu. In the Kerala floods, loss of life rose to 500. In the Titli Cyclone in Odisha and Andhra Pradesh, around 100 people lost their lives. In the recent Gaja Cyclone, Tamil Nadu lost around 65 lives. In all the three disasters, there was huge loss and damage to property and livelihood.



The State Disaster Management Authorities in these states faced challenges in anticipating and managing the disasters, due to lack of impact-based actionable early warning information. The Authorities also faced challenges due to the non-cooperation of some of the affected people, who refused to be evacuated because they did not want to leave their properties. This bad decision had even cost some of them their lives.

The Central and State Governments need to study these disasters and the lessons from them in order to avoid or at least reduce the impact of such damages in future.

1. Although the Disaster Management Act 2005 emphasises regular training of the officials and the people to prepare them for such disasters, it is not done earnestly and effectively. The training is carried out more as a matter of routine and for the record.
2. Floods and cyclones have become especially catastrophic because of the destruction of nature by the society. The Kerala floods is attributed to deforestation and poor maintenance of the Western Ghats. In Tamil Nadu, filling of lakes and ponds for construction of real estate, destruction of trees, and the removal of sand from the rivers have caused the intense damage.
3. Village *panchayats* and local bodies form the backbone of democracy in India. There is no *panchayat* or local body in Tamil Nadu as elections for those posts have not been held for the past two years. This absence of local body leaders created many difficulties during the evacuation and rehabilitation exercise.

PreSense appeals to the Members of Parliament to raise this critical issue of recurrent national disasters and their disaster management, during the Winter Session of the Parliament, and formulate guidelines to manage such disasters effectively in future.

by K. Srinivasan, Publisher and Mg. Editor
Source : Nov 2018 issue of PreSense

10th Edition of Sansad Ratna Awards



Sansad Ratna 2019 Awardees

Sitting: L to R – Dr Veerappa Moily, T S Krishnamurthy, Hon'ble Governor of Tamil Nadu Sri Banwarilal Purohit, Bartruhari Mahtab, Ananda Bhaskar Rapolu
Standing: L to R – Nishikant Dubey, Rajani Patil, Dr Heena Gavit, N K Premachandran, Rajeev Shankarrao Satav, Supriya Sule, Dhananjay Bhimrao Mahadik, Shrirang Appa Barne, Anurag Thakur

The 10th edition of the Sansad Ratna Awards was held at Durbar Hall in Raj Bhavan, Chennai in the afternoon of Saturday, 19th January, 2019. The chief guest for the occasion was Hon'ble Governor of Tamil Nadu, Shri Banwarilal Purohit. He was joined on stage by Shri T S Krishnamurthy, former Chief Election Commissioner of India, and Patron of the Sansad Ratna Awards Committee, Shri K Srinivasan, (Chairman, Prime Point Foundation, Founder, Sansad Ratna Awards, and Managing Editor, eMagazine PreSense), Shri Bhawanesh Deora, (President, Sansad Ratna Awards Committee), and Smt Susan Koshy, (Editor-in-Chief, eMagazine PreSense). Smt Sukruti Narayanan (Editorial Team Member of PreSense) was the Anchor for the afternoon and she guided the audience through the function.

The event commenced with the invocation song, *Thamizh Thai Vazhthu*. After felicitating the Hon'ble Governor and Shri Krishnamurthy with bouquets, Shri Srinivasan rendered his welcome address. He took the audience through the journey of the Sansad Ratna Awards, and enlightened them about the selection process for the Awards. He then submitted an ardent appeal to the Parliamentarians, requesting them to review the Education Loan Scheme and propose changes that would benefit the students who were the future of India.

The Sansad Ratna Awards Committee had received felicitations from several dignitaries, viz Hon'ble Vice-President of India, Shri Venkaiah Naidu, Hon'ble Speaker of Lok Sabha, Smt Sumitra Mahajan, Hon'ble Governor of Kerala, Justice (Retired) P Sathasivam, Hon'ble Governor of West Bengal, Shri Kesari Nath Tripathi, Hon'ble Governor of Mizoram, Shri Kummanam Rajasekharan and Hon'ble Chief Minister of Uttar Pradesh, Yogi Adityanath. Smt Susan Koshy read out the felicitation messages to the audience.

Shri T S Krishnamurthy, in his address, shared his perspective about democracy and then appealed to the Parliamentarians to consider proposing elections reforms in their manifesto for the forthcoming elections, for the sake of democracy. He also submitted a suggestion for institution of *Nirvachan Ratna Award* in a similar format to that of the Sansad Ratna Awards, to recognise the outstanding officials doing yeomen service in election work.

The Hon'ble Governor then presented citations to Indian Institute of Technology Madras (IITM), Canara Bank, PRS India, Sathyabama Institute of Science & Technology, Dr P.Ganesan and Shri Triambak Sharma, in acknowledgement of their support to the initiatives of Prime Point Foundation, eMagazine PreSense and the Sansad Ratna Awards Committee over the years.



Dr Veerappa Moily, Chairman of Finance Committee receiving the Sansad Ratna Awards from Hon'ble Governor of Tamil Nadu Shri Banwarilal Purohit. The other Finance Committee Members joined him to receive the Award.

The outstanding performing Members of Parliament (MPs) were then invited on stage individually to be presented the Award by the Hon'ble Governor. They were felicitated with a *Ponnadai* (shawl) and a Citation, followed by a photo session with the Hon'ble Governor, to a standing ovation by the audience.

The Hon'ble Governor then presented his address, wherein he shared some advice and tips as well as his personal experience as Member of Parliament, with the Parliamentarians. He added a couple of anecdotes that were useful to Parliamentarians and political aspirants. The Governor urged the MPs to do their best to sustain the spirit of democracy and take the country forward.

Shri Bhawanesh Deora, President of the Sansad Ratna Awards Committee rendered the Vote of Thanks. The function concluded with the national anthem.

Honouring Supporting Organisations

Some organisations and individuals have been supporting our eMagazine PreSense and Sansad Ratna initiatives during the journey of 10 years. PreSense honoured them during the Sansad Ratna Awards 2019 event.



**IIT Madras - Dr
Sudarsan
Padmanabhan**



**Sathyabama
University – Dr
Mariazeena
Johnson**



**PRS Legislative
Research – Dr M
R Madhavan**



**Canara Bank
Abdul Azeez**

**- Dr. P Ganesan
(Sivakasi)**

**Triambak Sharma
(Cartoonist from
Raipur)**

By Editorial Team

Source: Jan 2019 issue of PreSense

The Pulwama Attack – Enough is Enough

February 14 was a grieving day for India when 40 of our CRPF *jawans* fell to the fatal attack of terrorists in the district of Pulwama in our northernmost state of Kashmir. Even though such insurgency has been a constant threat and



occurrence since the Indian sub-continent split into India and Pakistan, the magnitude of the tragedy has left the entire country of citizens shell-shocked and shaken. Besides, the country was aghast to learn that this time, one of our own people – an Indian Kashmiri youth was the suicide bomber who killed our *jawans*. 'Cowardliness' and 'cruelty' seem inadequate to describe the horrendous action.

The issue of Kashmir has been the sore point of contention for the past over 70 years.

i) Right from 1947, the region has been in dispute even though the then ruling Maharaja of Kashmir had ceded the state to India under an Agreement, in lieu of India's military assistance to combat invaders, who crossed over from Pakistan. Pakistan however, has neither acknowledged nor

recognised this Agreement. Therefore, Kashmir for them, is a stake to be claimed by them on the basis of its prominent religion.

ii) Kashmir is currently governed by Articles 35A and 370 of the Indian Constitution, a provision intended as a temporary measure before absorbing the state wholly as part of India. This special provision has had emotional repercussions as the local Kashmiri residents continue to live in a state of mistaken identity and do not see themselves as belonging to India.

Militants who have vested interests in taking over Kashmir as well as disrupting the peace and unity of India, capitalise on this dispute and divided loyalties of the locals. They continue to bombard the place especially the bases of the military forces who protect the borders. These militant outfits also incite false emotional beliefs among the locals, especially the gullible youth. It is no secret which country in the neighbourhood has been backing and protecting these malicious intentions and militants in their missions.

So far, there has been a 'blow hot, blow cold' approach between the two countries. The selfish and short-termed political ambitions of our local leaders help little in any attempt to end the volatile state of affairs at the northern borders and state. Any pursuit to resolve through diplomacy and patience is only emboldening the enemy quarters to challenge our country and our armed forces in cowardly acts of violence. It is also taking away more and more lives of our *jawans*, and disrupting the sovereign peace and stability in our country. India as a country, has to take a strong, firm and uncompromising policy stand on the issue of cross-border terrorism and its patronage by our unfriendly neighbourhood country. There should be no compromise or softening of stand or more talks and treaties to camouflage the actual intent.

Another crucial step is to set our own backyard right, even while taking care of our borders. In the latest attack in

Pulwama, the suicide bomber is a local youth from Kashmir. This brings to the forefront a bitter truth. The breed of terrorists has become indigenous. The hardcore leaders and mentors of the terrorist outfits from across the border, had so far been exporting the breed to India. Today, they have instituted secret outfits within the Indian state of Kashmir and groomed a new generation of terrorists from its local towns. Most of the youth in Kashmir today are unemployed, idle, misinformed and gullible to fanatic teachings based on false religious claims. The first step in correcting this situation is to bring the state of Kashmir under the sole governance of the Indian Constitution which is the legal and righteous step. In other words, Articles 35A and 370 of the Indian Constitution, have to be abolished immediately and Kashmir needs to be educated about where it belongs and where its patriotism should be. It may be remembered that Dr B R Ambedkar, the architect of Indian Constitution was against Article 370.

Kashmir has been enjoying all the benefits and support extended by India, at par with the other Indian states and more, without any reciprocal obligation or responsibility by Kashmir. When the state was in dire floods recently, it was the Indian military force that rescued the hapless and homeless to safety. The state continues to enjoy annual development funds, but the citizens from other states cannot enjoy the privileges from Kashmir, that Kashmiris enjoy from the rest of India. This injustice and discrimination must go.

The call of the hour is for politicians to rise above their individual differences and ambitions and unite to work on a permanent solution to this decades' long unrest. Let us start from the first essential and crucial step – abolish Articles 35A and 370 and bring Kashmir into the whole, rightful and unconditional governance of the Indian Constitution. Step two – united, we must work against the terror that has established itself in the state of Kashmir and annihilate it, so that our *jawans* can concentrate at the borders to curb the infiltrators and enemies of the state. Step three would be annihilate the terrorists from just across the borders. Our efficient armed forces will take care of that, with a little help

from our politicians and leaders by not interfering in the execution of their duties. It is good to find an encouraging start of this initiative as our Air Force IAF attacked and destroyed the terrorists' camps that occupied hidden terrains across the borders.

by Susan Koshy, Editor-in-Chief
Source : Feb 2019 issue of PreSense

16th Lok Sabha – At a Glance



After completing the full term of five years, the 16th Lok Sabha concluded its final session on 13th February 2019. Although the media has carried a basic analysis of the performance of the 16th Lok Sabha the following morning, so far there has been no in-depth discussion about the performance of the Members. As the nation prepares for the 17th General Elections, it is pertinent at this juncture to analyse the performance of the 16th Lok Sabha vis-à-vis the earlier one, which was elected in 2014. PreSense attempts to bring out a quick review of the performance of the 16th Lok Sabha, in comparison to that of the 14th and 15th Lok Sabha.

Duties of Parliamentarians

- Enacting Laws
- Passing the Financial Budget
- Supervision of the Executive functions
- Representation of the issues of Constituency, State and Nation.

Tools Available in the Parliament

- Debates (Zero Hour, Rule No 377, Short duration discussion under Rule 193, calling attention motion, half an hour discussion, Financial business, debates during legislative business, private members bills, etc)
- Raising Questions
- Participation in Standing Committees

Uniqueness of 16th Lok Sabha

The 16th Lok Sabha has recorded some unique aspects during its tenure.

- Absolute majority by a single political party, after 1989;
- Online filing of notices by Members;
- Merger of Railway Budget with General Union Budget, after 91 years;
- Advancement of Budget presentation to 1st February, from 28th February;
- Passing of Budget proposals before the beginning of next financial year.

Productivity

Lok Sabha	Sittings	Actual working hours	Disruption	Productivity
14	332	1737	13%	87%
15	357	1342	39%	63%
16	331	1616	15%	85%

Data source: PRS Legislative Research / Lok Sabha site

- 16th Lok Sabha has shown improved productivity, compared to 15th Lok Sabha.

Members Participation

Parameter	14 Lok Sabha	15 Lok Sabha	16 Lok Sabha
Debates (D)	15324	18121	21196
Debates – Average per member	31	38	44
Private Members Bills (PMB)	309	372	1116
PMB – Average per member	0.6	0.8	2.3
Questions raised (QR)	89055	143635	142158

Questions – Average per member	179	300	292
Total Tally (D+PMB+QR)	104688	162126	164470
Total tally – Average per member	210	339	338
Average Attendance	70%	76%	80%

Data source: PRS Legislative Research

- There is a marked improvement in the participation by members in Debates, Private Members Bills and Attendance.
- Debates include both initiated debates and associated debates in the 14th and 15th Lok Sabha. The 16th Lok Sabha has shown a substantial increase in Associated Debates (Initiated Debates 21196 and Associated Debates 11166). We have taken only Initiated Debates for our analysis in this article)
- Ministers do not participate in debates, raise questions or introduce PMBs. They are excluded for calculating averages throughout this article.

Legislation

Standing Committee	Lok Sabha		
	14th	15th	16th
Bills introduced (Other than Finance and Appropriation Bills)	245	228	190
Bills referred to Standing Committee	147	157	39
Bills referred to JPC	1	0	5
Bills referred to RS Select Committee after passage by LS	0	4	8
Total Bills referred to Committee	148	161	52
Percentage of Bills referred	60%	71%	27%
<i>*Above Data does not include Finance and Appropriation Bills</i>			
<i>Bills which were referred again during the subsequent Lok Sabha period have been included in the list for the same Lok</i>			

Sabha period in which they were originally introduced and referred to avoid double counting.

	14th	15th	16th
Bills Introduced and Passed			
Finance and Appropriation Bills Introduced	74	63	47
Other Govt. Bills Introduced	245	228	190
Total Bills Introduced	319	291	237
Other Govt. Bills Passed	173	116	133
Finance and Appropriation Bills Passed	74	63	47
Total Bills Passed	247	179	180
Total Bills Lapsed	39	68	46

Data source: PRS Legislative Research

- 46 Bills got lapsed in 16th Lok Sabha as against 39 and 68 Bills in 14th and 15th Lok Sabha.
- Fewer number of Bills (i.e. 27%) were referred to Standing Committees during the 16th Lok Sabha as against 60 and 71 percent Bills respectively, referred in the 14th and 15th Lok Sabha.

Departmentally Related Standing Committees (DRSC) – Lok Sabha – 16 DRSCs

Lok Sabha	No. of Sittings	Bills referred	Reports presented
14			627
15	1362	67	662
16	1343	17	720

Data source: Lok Sabha site

- There are 24 Departmentally Related Standing Committees in the Parliament (DRSCs). (16 relate to Lok Sabha and 8 relate to Rajya Sabha). Data for Rajya Sabha Committees is not available.

- Three important functions of DRSCs: (1) Discuss and report on policies (2) Scrutinise the budgetary proposals and (3) Scrutinise bills referred to the committees.
- During the 16th Lok Sabha, fewer number of bills were referred to DRSCs.

Performance of Members – State-wise

State	14 th Lok Sabha			15 th Lok Sabha			16 th Lok Sabha		
	No. of MPs	Total (D+ PMB+ QR)	Average per member	No. of MPs	Total (D+ PMB+ QR)	Average per member	No. of MPs	Total (D+ PMB+ QR)	Average per member
Maharashtra	45	14623	325	44	22222	505	48	28904	602
Kerala	19	5029	265	17	7694	452	21	10231	481
Tamil Nadu	29	5826	201	38	14713	387	38	18168	478
West Bengal	39	7449	191	43	7905	184	46	4996	109
National	498	104688	210	478	162128	339	486	164470	338

Data source: PRS Legislative Research

D-debates; PMB – Private Members Bills; QR – Questions raised

- Ministers excluded in the number of MPs.
- For 16th Lok Sabha, Initiated Debates only taken into account. Associated Debates excluded.
- Maharashtra and Kerala have consistently maintained their position as toppers amongst the States.
- Tamil Nadu has shown better participation in the 15th and 16th Lok Sabha as compared to the 14th Lok Sabha.

Performance of Members – Party-wise

Political Parties	14 th Lok Sabha			15 th Lok Sabha			16 th Lok Sabha		
	No. of MPs	Total (D+ PMB+ QR)	Average per member	No. of MPs	Total (D+ PMB+ QR)	Average per member	No. of MPs	Total (D+ PMB+ QR)	Average per member
Shiv Sena	12	5328	444	11	7793	709	17	12476	734
NCP	9	1696	188	7	2733	399	7	4271	610
BJP	131	27637	211	119	42404	356	264	74916	284
Congress (INC)	126	25085	199	177	49616	280	50	15968	319
CPI(M)	42	6554	156	16	4788	299	9	4333	481
AIADMK	-	-	-	9	4587	510	37	18106	489
DMK	10	1471	147	18	4431	246	-	-	-
CPI	10	3558	356	4	2004	501	1	451	451
AITC	1	32	32	20	1348	67	38	3597	94
National	498	104688	210	478	162128	339	486	164470	338

Data source: PRS Legislative Research

D-debates; PMB – Private Members Bills; QR – Questions raised

- Ministers excluded in the number of MPs.
- For 16th Lok Sabha, initiated debates only taken into account. Associated debates excluded.
- Shiv Sena has been the topper consistently.
- CPI(M) has shown better performance under Debates.

Performance of Members – Age-wise

Age group	14 th Lok Sabha			15 th Lok Sabha			16 th Lok Sabha		
	No. of MPs	Total (D+ PMB+ QR) in lakhs	Average per member	No. of MPs	Total (D+ PMB+ QR) in lakhs	Average per member	No. of MPs	Total (D+ PMB+ QR) in lakhs	Average per member
Less than 45	90	0.18	184	80	0.29	362	83	0.28	343
46 to 60	219	0.51	232	232	0.74	320	217	0.74	343
61 & above	183	0.36	197	209	0.59	282	243	0.62	254
National	498	1.05	210	478	1.62	339	486	1.64	338

Data source: PRS Legislative Research

D-debates; PMB – Private Members Bills; QR – Questions raised

- Ministers excluded in the number of MPs.
- For 16th Lok Sabha, Initiated Debates only taken into account. Associated Debates excluded.
- The younger members of less than 45 years of age have participated more in the 15th and 16th Lok Sabha.

(Ministers do not participate in the Debates, introduce Private Members Bills or raise Questions. They have been excluded from the analysis for this article).

Toppers

Lok Sabha	National Level toppers	
	Name of the MP	Total tally
14	Shri Anandrao Adsul	1290
	Shri S K Kharventhan	1287
15	Shri Anandrao Adsul	1304
	Shri S S Ramasubbu	1236
16	Smt. Supriya Sule	1321
	Shri Rajeev Satav	1255

Data source : PRS Legislative Research

Shri Anandrao Adsul (Shiv Sena) was the topper in the 14th and 15th Lok Sabha. He is a fifth time MP from Maharashtra. He is also the Chairman of the Sansad Ratna Awards Jury Committee, instituted by PreSense. He secured the 9th position in the 16th Lok Sabha in spite of various responsibilities shouldered by him.

Shri S K Kharventhan (Cong) and Shri S S Ramasubbu (Cong) who secured the second position in the 14th and 15th Lok Sabha, are from Tamil Nadu.

In the 16th Lok Sabha, Smt. Supriya Sule (NCP), second-time MP secured the top position, and Shri Rajeev Shankarrao Satav (Cong), first-time MP, secured the second position. Both are from Maharashtra. PreSense congratulates all the toppers and performers of the 14th, 15th and 16th Lok Sabha.

16th Lok Sabha – Sum Up:

- Various unique decisions implemented for the first time in the 16th Lok Sabha.
- The 16th Lok Sabha showed increased productivity with fewer disruptions, when compared with 15th Lok Sabha'
- Participation by Members were good compared to the earlier Lok Sabha sessions; The younger MPs showed good performance in the 16th Lok Sabha.
- Departmentally Related Standing Committees have presented more reports to the Parliament.
- Fewer number of bills were referred to Standing Committees.

***by Prime Point Srinivasan, Publisher & Mg. Editor,
Source: Feb 2019 edition of PreSense***

PreSense Lok Sabha Index

Your eMagazine PreSense, in consultation with Parliamentarians and experts, has developed an Index to

PreSense Lok Sabha Index - Guidelines

No	Parameter	Norms to get 10 marks	Explanation
1	No. of working days (Sittings)	375 (average 75 days per annum)	Since Departmentally Related Standing Committees are in place since 1993, the sittings of the House have decreased.
2	Productivity	Zero disruption – 100% productivity	Zero disruption is the goal
3	Average Attendance	100%	100% attendance is the goal
4	Debates	16250 (3250 per annum)	There is no provision in the rules as to how many debates have to be held and how many Members have to participate in the debates. However this has been taken on the basis of practice and past records. Zero Hour (20 x 70 days = 1400); Rule 377 (20 x 60 days = 1200); Bills discussions (10 members x 40 bills = 400); Private Members Bills (5 members x 10 bills = 50); Rule 193 (20 members x 5 = 120); Discussion on President's address (30 x 1 = 30); Budget discussion (50 members x 1 = 50) = Total 3250 per annum
5	Private Members Bills (PMB)	350 (70 per annum)	This has been taken on the basis of past records, as there is no provision in the rules as to the number of PMBs can be introduced.
6	Questions	87500 (17500 per annum)	As per rules, maximum of 250 questions can be listed for a day. If various Members ask the same question, they will be clubbed as a single question for answer. But all the members will get the credit individually. (250 x 70 days = 17500 per annum)
7	Government bills passed	200 (40 per annum)	This has been taken on the basis of past records, as there is no provision in the rules as to the number of bills can be introduced.
8	Lapsed bills	Zero	if the bills introduced in Lok Sabha, are kept pending in the Rajya Sabha, after being adopted in Lok Sabha, the bills lapse automatically after the dissolution of the current Lok Sabha. Ideally, bills which are passed by Lok Sabha should be passed by Rajya Sabha as well.
9	Departmentally Related Standing Committees - Reports	800 (10 reports per committee per annum – 16 committees)	DRSC system was introduced in 1993 and there is no general rule as to the number of reports to be presented by a committee. However, taking into account recent introduction of committee system, average record has been taken.
10	Percentage of bills referred to committees	100%	Ideally, all the bills introduced in Lok Sabha are to be referred to Departmentally Related Standing Committees for scrutiny and suggestion.

evaluate the performance of Lok Sabha under 10

parameters. PreSense has also defined norms based on Parliamentary rules, practises, pasty averages and capacity. This will be known as '**PreSense Lok Sabha Index**' and this Index will be used in future too.

Using this Index, PreSense analysed the performance of 14th, 15th and 16th Lok Sabha on the 10 parameters. Based on the analysis, PreSense has observed as follows for the performance of 16th Lok Sabha.

PreSense Lok Sabha Index

No	Parameter	14th Lok Sabha		15th Lok Sabha		16th Lok Sabha	
		Achievement	Marks	Achievement	Marks	Achievement	Marks
1	No. of working days (Sittings)	332	8.85	357	9.52	331	8.82
2	Productivity	87	8.70	63	6.30	85	8.50
3	Average Attendance	70	7.00	76	7.60	80	8.00
4	Debates	15324	9.30	18121	10.00	21196	10.00
5	Private Members Bills	309	8.82	372	10.00	1116	10.00
6	Questions	89055	10.00	143635	10.00	142156	10.00
7	Government bills passed	173	8.65	110	5.80	133	6.65
8	Lapsed bills	39	6.10	68	3.20	46	5.40
9	Departmentally Related Standing Committees (DRSC)- Reports	627	7.83	662	8.27	720	9.0
10	Percentage of bills referred to committees	60	6.00	71	7.10	27	2.70
Total Score			81.25		77.79		79.07

Data source: Lok Sabha Secretariat / PRS Legislative Research

- Participation by Members in Debates, Private Members Bills and Questions are quite satisfactory.
- Reports of the Departmentally Related Standing Committees are more than earlier sessions;
- Productivity is good compared to 15th Lok Sabha, with less disruption.
- Lapsed bills in 16th Lok Sabha are more compared to 14th Lok Sabha but less than in 15th Lok Sabha.
- Fewer number of bills were referred to DRSC for scrutiny.

by Prime Point Srinivasan, Publisher & Mg. Editor

Source: Feb 2019 issue of PreSense

Is Social Media the 'Game Changer' For Indian General Elections 2019?

Indians experienced the impact of the social media in elections' campaigning for the first time in 2014. Many technology tools were used then. The voters who were used to the traditional style, experienced a different kind of campaigning which was run through internet tools. The then BJP party candidate and Prime Minister-designate, Narendra Modi used these tools effectively. In 2016, the social media was utilised in full swing during the US Presidential Elections.



Growth of Social Media

Internet tools are used in elections' campaigning across the world since 2012. Facebook, Twitter, YouTube, Instagram and WhatsApp are mainly used in India for political communications. The penetration of the mobile phones in India over the past five years, and the availability of internet data at very low cost, has increased its use in political communication and in a highly competitive manner by political parties.

Between 2014 and 2019, mobile subscribers have gone up by 32% and internet subscribers have gone up by nearly 12 times. The entry of Jio as service provider has revolutionised data usage by smartphone users.

Category	No. of Mobiles in millions		Tele-density for Mobiles in %	
	Jan 2014	Jan 2019	Jan 2014	Jan 2019
Urban	529	654	139	157
Rural	364	528	42	59
Total	893	1182	72	90
Internet	42	522		

Source: TRAI website

Social media users have gone up from 125 million in 2014 to 360 million in 2019, with a three-fold increase. This has created more challenges for political parties. The social media remains both a boon and a bane for the political parties.

"The early movers in the social media have gained a lot. Their early gain in the social media is still there but it is fast eroding with others playing quick catch-up, especially in the rural constituencies. Newer tools and micro segmentation analytics that can precisely predict user clusters/user behaviour, using AI (Artificial Intelligence) and Deep Learning technologies are now being used", says Srinivasan Venkatraghavan, social media data expert.

Political Parties in Social Media

Currently, all political parties at the national and regional levels, are using social media tools extensively for their political communication. Prime Minister Narendra Modi has more followings in the social media than frontline Opposition leader, Rahul Gandhi. Interestingly, during March 2019, Rahul Gandhi's tweets were more re-tweeted than those of Narendra Modi.



On 27th March 2019, Prime Minister Narendra Modi announced the achievement of DRDO scientists in 'Mission Shakti'. Both Narendra Modi and Rahul Gandhi tweeted on this issue. Narendra Modi's tweet had more re-tweets than that of Rahul Gandhi.



These social media engagements are also taken up by mainline media like the television and the print media. Therefore, the views from the social media are discussed outside the social media too.

Almost all the parties are using WhatsApp groups to communicate their messages and instructions to their last mile workers. They also use WhatsApp groups to transmit their messages to potential voters.

According to the Election Commission data, 25 million new voters were added in 2014 and 45 million in 2019. The total number of voters in India is around 900 million. The new voters, particularly from the younger age group, should not be taken for granted.

Traditional and Social Media Campaigns

Two questions emerge while considering the type of campaigning to use to reach potential voters:

- whether the social media communication could influence voters to vote in favour of the candidates, and
- whether the young voters who spend more time on social media, would actually go to the polling booths to cast their votes, since the campaigning style itself has changed over the past five years, due to the emergence of the social media.

Interestingly, during the 2014 and 2016 elections, Jayalalitha in Tamil Nadu did not bother about the social media, to the extent that even the party's website was not updated. She

resorted to traditional campaigning, by personally reaching out to the people. Even though the other parties used the social media extensively for their campaigning, Jayalalitha and her party swept the polls. According to Bhanu Gomes, a political analyst, the social media does not add much to the existing charisma of mass leaders. The social media is only complementary for them.

Opinions are divided when assessing whether young voters would go to polling booths for voting on election day. According to many party workers who work at the ground level, only very few of the youngsters in the past who had shared their strong views on social media platforms, had actually gone to the polling booths to vote. With the Election Commission currently on an aggressive campaign mode for 100% polling, it is expected that many more youngsters will go to the polling booths on the election day to cast their votes.

It is the opinion of almost everyone who was asked, that the social media would have some impact in influencing potential voters. When the engagements of the social media are picked up by the mainline media, they assume greater significance. Those topics are picked up for discussion and debate by the mainline media, and are also discussed by the people.

"The uneducated voter may not be influenced by the social media, as he goes by various other parameters to vote for a candidate", says Ranganathan, digital media consultant.

Social Media		
Twitter - followers	46.6 M	9.1 M
Facebook - followers	45.0 M	2.0 M
Instagram - followers	19.6 M	0.6 M
Twitter – Average retweets *	5.8 K	9.0 K

* Average for the last 25 tweets in Mar 2019

According to C H Sekhar, Ex-MLA (Member of Legislative Assembly), who contested the elections three times before, there is an increase in the impact of the social media in influencing the voters. "In my view, about 10-15% of the voters can be influenced by the social media. There are fence sitters in every constituency. They may not be unduly influenced by a single message. They will compare and analyse fully before voting. However, the social media will also help them in taking a decision. The trending in the social media about a week before the polling date, can influence greatly", he added.

Dr Y S Rajan, eminent scientist and co-author of the book, *India 2020* with Dr Abdul Kalam, says that the middle-class and the lower middle-class people take the elections seriously. The social media reflects the mood of the middle-class. The people of the upper middle class do not take the elections seriously. It is doubtful how many of them go to polling booths. Information not carried by mainline media, is usually circulated in the social media.

Many political leaders agree that the campaign model has changed. K T Raghavan, a senior leader of a national party agrees that political parties have to depend on social media to reach out to their party workers and voters, due to the restrictions imposed on wall posters and street meetings. He agrees that the penetration of the social media is more than what it was in 2014, and that political parties do face the challenge of converting this into votes.

Generally, the voters decide their votes, based on the political party rather than the candidate. Around 10-15% of the fence sitters may vote according to their last-minute perception, influenced either by the party or the candidate. These would be the deciding votes. Everybody agrees that the social media can influence this segment of fence sitters to take their decision.

Challenges

Even though the social media helps political parties to run their campaigns to reach their target audience, it also poses great challenges to the parties.

"Innumerable fake news generating agencies have come up. They spread YouTube videos out of context. Fake news, misinformation, disinformation and malinformation (malicious information) are already playing a major role in communication, in the run-up to this year's elections. Emotional messages are transmitted. Even rural people view WhatsApp messages, which are transmitted in the local languages", says C J Singh, Strategic Communication Consultant from Chandigarh.

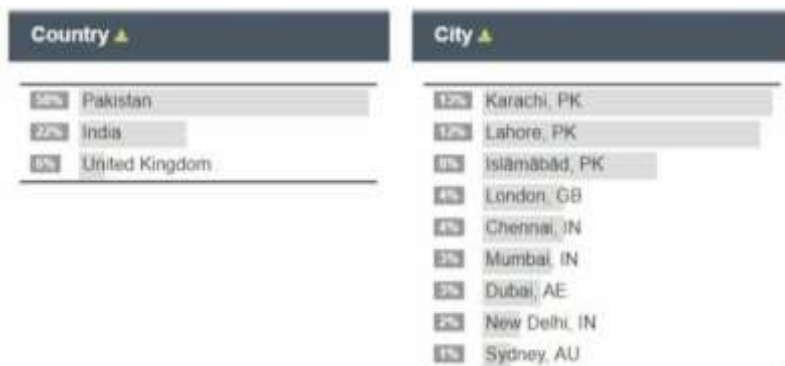
Many political workers and supporters have started circulating fake news and memes to malign their opponents, without realising that they could boomerang on them too. WhatsApp groups are flooded with fake news. They run the risk of influencing the people to take decisions, based on misinformation or incorrect messages received by them.



In the recent years, memes have become popular in the social media. Meme creators use text, image and video to convey political messages in a humorous way.

"Entertainment-oriented humorous memes in regional languages are used by political workers to attack their rivals. People enjoy memes. Memes can create crisis situations for even senior leaders", says Sridhar Raj, President of Next Gen Political Leaders Forum (NGPL).

It is also reported that some foreign countries are interfering in the election campaigning, using the social media to create confusion in India during its run-up for elections. On 1st March 2019, some opposition parties at Chennai campaigned



against Narendra Modi with a global trending of *#GoBackModi*. According to Ranganathan, social media trend analyst, nearly 58% of the tweets originated in Pakistan and 6% in UK, much to the shock of the opposition parties, which had initiated this trending. Strangely, Chennai which started the campaign had only 4%. According to Ranganathan, such trending might not impact much as they are short-lived. However, when the trending is carried through the mainline media, it reaches a larger section of the people.

Wrap Up

According to many experts, General Elections 2019 can show around a 5% swing in the voting pattern, due to social media. Every 1% swing makes a difference for the candidates. As the social media does not have any regulator at present, fake news will continue to pose greater challenges to the political parties and its candidates. Even though the Election Commission is taking active steps to regulate social media advertising, it would be difficult to totally eradicate/prevent fake news, misinformation, disinformation and malinformation. This throws more responsibility on the citizens and social media users. Every citizen should ensure that wrong information is not circulated

in the social media, which can destroy the credibility of the genuine candidates. Mainline media should take efforts to create awareness among the people for responsible use of the social media, instead of looking for sensational news.

***by K. Srinivasan, Publisher and Mg. Editor, PreSense
Source : March 2019 issue of PreSense***

Chowkidar Crowned as King

Historic Victory

The 2019 General Elections (*Lok Sabha*) has given a massive mandate to Prime Minister Narendra Modi to continue his leadership of the BJP-led NDA Government for another five years. The landslide victory by this political combine has not only stunned political parties within the country but the entire world. BJP increased its vote share and seats over its first term verdict of 2014. The Indian National Congress (INC) increased the number of its seats marginally in the Lower House, but with a reduced vote share, falling short again, for the second time, of the required minimum number (one tenth of the strength of the House of 543 seats) to qualify for the official position of Opposition Party in the House.

Party	2014		2019	
	Seats	Vote share %	Seats	Vote Share %
BJP	282	31.3	303	37.5
INC	44	19.5	52	18.3
NDA	336	38.5	353	45.0
UPA	60	23.1	91	26.0

In 2019, BJP has secured 229 million votes, as against 171 million votes in 2014. INC secured 119 million votes in 2019 as against 107 million votes in 2014. In 2019, BJP has added more than 50 million votes to its tally, with an additional 6% increase in its vote share.

India is the world's largest democracy with more than 607 million registered voters exercising their franchise personally to elect their Government. In 2019, as against 910 million eligible electors (834 million in 2014), 66.7% voters (66.4% in 2014) exercised their franchise. In 2019, 607 million (554 million in 2014) voters went to the polling booths to cast their votes. For the first time, Indian voters were able to see the symbols of the political parties which they voted for,

through VVPAT (Voter Verifiable Paper Audit Trail) machines. Although the opposition parties expressed concerns about alleged manipulation of the EVMs (Electronic Voting Machines), not a single complaint from any voter was registered about wrong display in the VVPAT machines. Besides, during the counting, more than 20,000 VVPAT machines were physically tallied with the corresponding EVM Machines and found to be accurate.

Why This Massive Mandate?

After the declaration of the polling results, PreSense conducted a quick online survey to understand the people's perception, and contacted several voters pan-India. The general perception was in favour of a strong leader to lead the nation.

Not Projecting a PM Candidate by Opposition: Rahul Gandhi of INC could not bring all the Opposition Parties together under a single umbrella of the UPA (United Progressive Alliance) banner. More than 12 regional parties contested in the elections, each with its own Prime Ministerial ambition. While NDA projected Modi as their PM, neither the Congress nor any of the other Opposition Parties could project a single leader. This worked to the advantage of NDA as people could not see an alternative leader to Modi, with the TINA factor operating (There Is No Alternative).

Wrong Campaign by Opposition:

Although the Modi's regime was stacked with economic deficiencies like unemployment, farmers' issues, impact of demonetisation and GST, slow growth of the manufacturing



sector, the Opposition Parties did not campaign strongly on these issues. Instead, they ridiculed the Pulwama attack on

our security forces as well as the Balakote bombings of the suspected terrorist camps in the valley by our security forces. This infuriated a large section of the common people to whom nationalism and patriotism is primary. This *faux pas* was cleverly leveraged by BJP in its election campaign, projecting national security and citizen security over all other issues in its election campaign. Besides, Congress leader Rahul Gandhi focussed on '*Chowkidar Chor Hai*' slogan, leading even to his tendering an unconditional apology before the Supreme Court in this context at the height of his election campaigning. The Rafale aircraft deal signed by the Prime Minister himself in 2016 at Paris, was raked up by the Congress for alleged corruption issues and of favouring a particular big industrial house, but it did not cut much ice with the voters for want of evidence.

Political experts claim that the Congress-led Opposition and *Mahagatbandhan's* (Grand Coalition) ambition of multiple choices for the Prime Ministerial candidate created confusion and apprehension amongst the people, thereby feeling that a strong leader was the 'need of the hour'. There was no better alternative to Modi as the proven Prime Minister. The people felt very strongly that an 'undecided crowd of parties' was definitely not an alternative.

Past Experiences: Political analysts quote the example of the 1971 and the 1980 General Elections with similar phenomena. In 1971, when Indira Gandhi declared the '*Garibi Hatao*' (Remove Poverty) slogan, the Opposition Parties had a single agenda of '*Indira Hatao*' (Remove Indira). Indira Gandhi went on to win 352 seats in the elections. History seemed to repeat itself, as in the 2019 elections, even as Modi declared a resurgent 'New India' slogan, the Opposition Parties had a single agenda of '*Modi Hatao*' (Remove Modi).

In 1977, post emergency, Indira Gandhi was defeated by the Janata Party, riding on the wave of the people's anger against the emergency and its alleged atrocities. However, within two years, the Government fell due to infighting. In 1980, Indira had a massive win with 353 seats.

Past experiences indicate that Indian voters always look for stability in the Government and the leadership of the PM candidate. The same Indira Gandhi, rejected by voters in 1977 polls, was returned to power with a massive mandate in 1980 as the Opposition that formed the Government, messed up due to infighting over leadership issues. The then Prime Minister Morarji Desai, was replaced by an over-ambitious Haryana leader, Charan Singh. But his Government fell.

Tamil Nadu Mandate: It is interesting to note that while almost the entire country voted for Modi, in Tamil Nadu, the regional political party, DMK projected Rahul Gandhi as PM candidate, which the Opposition failed to do at the national level. It was a battle of 'Modi vs Rahul'. With Anti-Modi sentiments riding high because of his support to a fledgling faction-ridden AIADMK without Jayalalitha, the DMK allies swept the polls, bagging 37 out of 38 seats. People suspected that AIADMK was being puppeteered by the Central Government and was carrying out their dictates in the state without protecting the local interests. It may be recalled that during the 2014 elections when Jayalalitha campaigned, she promoted the slogan, "*Modi or Lady*". She bagged 37 out of 39 seats then.



So, past experiences clearly indicate that the people want a choice of strong leaders, and in its absence prefer the best available candidate. In the 2019 polls, it turned out to be Modi again as in 2014.

Challenges before Modi Government

As Modi begins his second five-year tenure as Prime Minister, he has all the odds of economics ills stacked against him. He faces several serious challenges at the political and economic level. High on the agenda of challenges that Modi faces are:

- Demonetisation and introduction of GST crushed the small trade and industry leaving them cash-strapped as the country runs on 85% cash transactions.
- The manufacturing sector is very sluggish. Due to the oil crisis (high prices of crude), India has to pay more foreign exchange for importing crude and POL (Petroleum, Oils and Lubricants) thus depleting its foreign exchange reserves. With sluggish exports, as incentives were low, South-East Asian countries competed fiercely with India over a variety of commodities including *basmati* rice, so much so, the Capital Account Deficit (CAD) has widened considerably, exerting pressure on inflation and fiscal deficit. CAD is the difference between import revenues and export earnings, and the former has exceeded the latter. Tax revenue has come down even though compliance has risen. This might lead to a deficit in the budget. Notwithstanding this, people have given a massive mandate to Modi to continue so that he can work on the 'structural reforms' introduced by him, which have however inadvertently caused collateral damage to the lower sections of trading classes.
- Although Modi promised job creation and *Ache Din* during the 2014 elections, people feel that nothing has materialised. Many of the schemes like 'Make in India', 'Start Up India', 'Stand up India', 'Skill India' have not been properly executed, keeping with the well-intended spirit of the programmes. A separate ministry to monitor these important schemes seems imperative to drive growth and generate more employment.
- The promise to bring back all black money from foreign countries and to punish the corrupt politicians has not yet

been implemented fully till date. Unfortunately, candidates with tainted records have got re-elected to the *Lok Sabha* this time. The new regime should be firm and strong in dealing the corrupt severely.

- Since the BJP has returned to power, some of the aggressive *Hindutva* forces may re-emerge and create problems about cow vigilantism (some people were lynched on suspicion of slaughtering cows for the sake of eating beef). Even if there were such isolated incidents, a section of the media with vested interest, could blow this up at national and international levels and tarnish the country's image, creating unnecessary fear among the minorities. The Government should keep a tight leash on such aggressive elements and also that section of the media which may generate unwanted panic amongst the people.
- In the earlier regime, the Government had put a ban on the flow of foreign funds to some NGOs, who were using the money for anti-national activities. These NGOs may create more trouble in a different form to show their anger against the Government. The Government should be firm on such NGOs and the persons who indulge in anti-national activities.
- Although BJP has swept almost the entire country, they were unable to convince some of the major Southern states like Tamil Nadu, Kerala and Andhra Pradesh. In the South, BJP is perceived as a North Indian party. In the past regime, the Government did not show much interest in the Southern states. Thus, while the entire country had the 'Modi Wave', the Southern states had the 'Anti-Modi Wave'. The new Government should develop the relationship with frequent visits to the Southern states. The current North-South divide must be bridged immediately.

- With the massive majority, now the *Modi Sarkar* can try to resolve the Kashmir issue firmly, so that terrorism can be under control.

Summing Up

Indian voters have given a historic mandate to Narendra Modi for the second time to govern the Nation, notwithstanding some of the negative aspects of its earlier regime. Indian voters have reposed faith and confidence in Modi, so that he can continue his efforts to improve the economy and living standards of the people. PreSense wishes Modi and his new team the very best to lead the nation to greater heights.

***By K. Srinivasan, Publisher and Mg. Editor, and T N
Ashok, Editorial Advisor
Source : April 2019 issue of PreSense***

Section V: Life of Prince, the Cartoon character

The Interesting Story of Cartoon Character, Prince

The cute little cartoon character, Prince has been adding value and humour to your ezine, PreSense for the past five years. He has been conveying powerful messages with a sense of humour. The creation and the journey of Prince are interesting and amazing.



In July 2008, on Dr Abdul Kalam's suggestion, the editorial team decided to introduce cartoons in the ezine. When we made an announcement to the effect in the PRPoint group, Mr. Triambak Sharma, a well-known cartoonist from Raipur and the editor of Cartoon Watch (picture on left) volunteered to provide cartoons for the ezine every month. Instead of publishing regular assorted cartoons, the editorial team decided on a cartoon character, on the lines of R K Laxman's 'Common Man', to convey the message.

On 3rd July 2008, the editorial team made an announcement about its idea in the groups, and invited suggestions from the members, and a suitable name for the character. The team received an overwhelming response of 100 suggested names. The suggestion given by Ms Uma, a communication professional to name the character as 'Prince' received unanimous approval of the editorial team. 'Prince' was



Dr Abdul Kalam launching the first cartoon with his autograph (24 Jul 08)



introduced to the groups on 10th July 2008.

"I wanted Prince to be the youth icon of this 21st century, as a representative of the professionals working in corporate and other offices. Hence, I created him as an energetic young person, wearing a trendy outfit and a necktie. I am proud that Prince was born in Raipur", says Triambak Sharma proudly.

The first cartoon, created by Triambak Sharma, was launched by Dr Abdul Kalam himself with his autograph, on 24th July 2008 at Rajbhavan, Chennai (picture above). The cartoon character was created and launched within 20 days of the editorial team's decision to include the cartoon in the ezine.

Every edition of the ezine from July 2008 onwards contains a Prince cartoon. In every issue, Prince conveys a powerful message with a sense of humour. Thus, Prince won itself many fans. Prince became popular worldwide.

In April 2010, The Wall Street Journal of America carried one of the Prince cartoons with the permission of Triambak Sharma. (picture) The popularity of Prince grew day by day, both nationally and internationally.



In May 2010, a CD containing the Prince cartoons was released on the occasion of the launch of the Golden Jubilee edition (50th) of ezine. It was also displayed on the internet.

Prince, who was a Casanova till then, married his sweetheart 'Pincess' in the Diamond Jubilee 60th edition, published in February 2011 (picture



on the right). "Only married people can understand the problems of the common person and communicate in a mature manner. Subsequent to his marriage, Prince started talking about many serious issues affecting the common citizen", says Triambak Sharma when asked why Prince married hastily. The readers could notice that after the 61st edition, Prince conveyed more serious messages than what he used to, before his marriage.

Interestingly, Dr A P J Abdul Kalam himself is one of the great fans of Prince. While addressing the Cartoon Festival at New Delhi on 29th April 2011, Dr Abdul Kalam suggested that cartoonists should be remembered for creating cartoon characters like 'Common Man' and 'Prince'.



100th Prince cartoon was launched at Raipur by Dr Raman Singh, Chief Minister of Chhattisgarh on 12th October 2016. (picture)

The video produced during that occasion can be watched from this link.

<https://youtu.be/IEWszuZTInE>

While Mumbai can be proud of 'Common Man' created by R K Laxman, Raipur can now be proud of Triambak's 'Prince'.

By K Srinivasan, Editor in Chief, PreSense

Select 'Prince' cartoons



First Cartoon launched by Dr APJ Abdul Kalam - July 2008



January 2015 – Homage to late R K Laxman, cartoonist

PRince

by- Triambak Sharma

www.cartoonwatchindia.com
cartoonwatch@gmail.com



GURR!! I THINK
I HAVE TO APPOINT
ONE PERSON TO DELETE
SPAM... AND FORWARDED
MESSAGES..



January 2011



July 2012



January 2013



November 2010



September 2012 – Homage to Dr V Kurien, Father of the White Revolution.



March 2013



May 2013 – This cartoon was published when IPL scam broke



August 2013



February 2014 – Before Indian General Elections 2014

PRince

By- TRIAMBAK SHARMA



www.cartoonwatchindia.com, cartoonwatch@gmail.com

**I AM REALLY HAPPY WITH THIS
DECISION.. ONLY "MY WIFE"
IS NOT HAPPY...**



NO
FAVOURS
TO
RELATIVES
-MODI

© TRIAMBAK.

May 2014



August 2014



October 2014



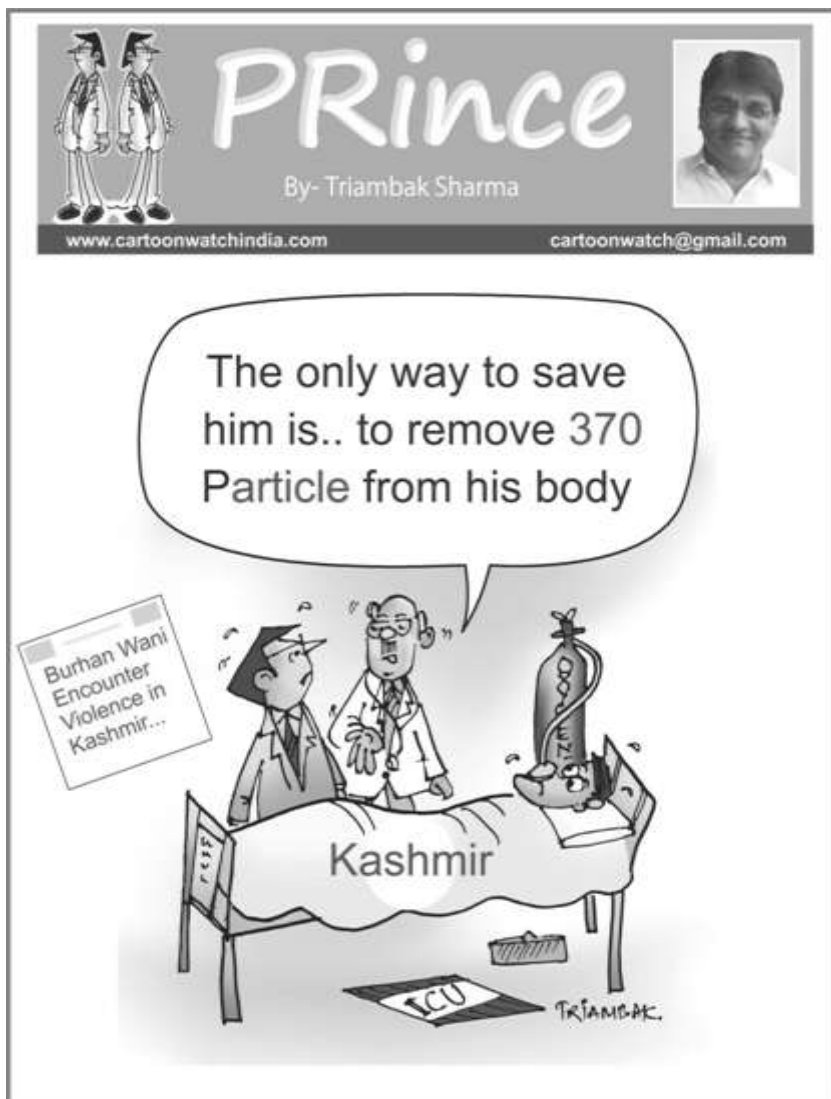
April 2016



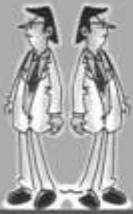
Prince paying homage to Dr Abdul Kalam in July 2015 edition



June 2016



July 2016



PRince

By- Triambak Sharma



www.cartoonwatchindia.com

cartoonwatch@gmail.com

**DAD..IS IT TRUE THAT...
CARTOON CHARACTER
DONALD..
IS NOW
U.S.PRESIDENT..??**



Jan 2017



March 2017



April 2018



Feb 2018



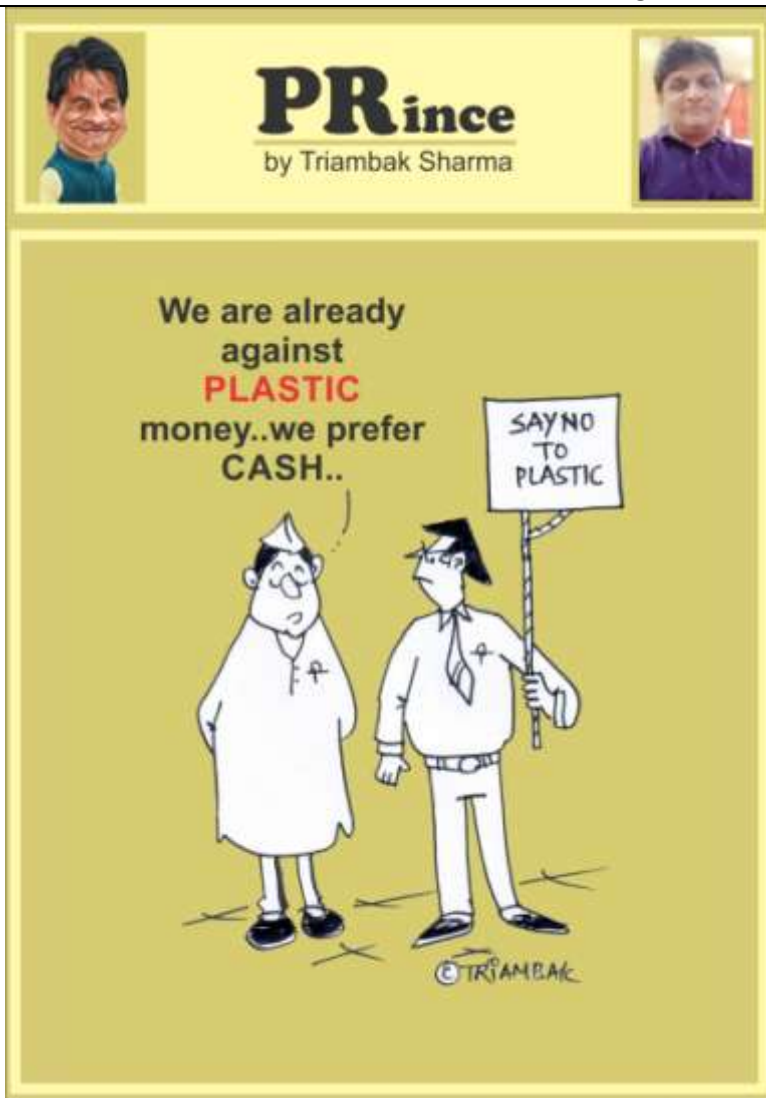
June 2018



Oct 2018



July 2018



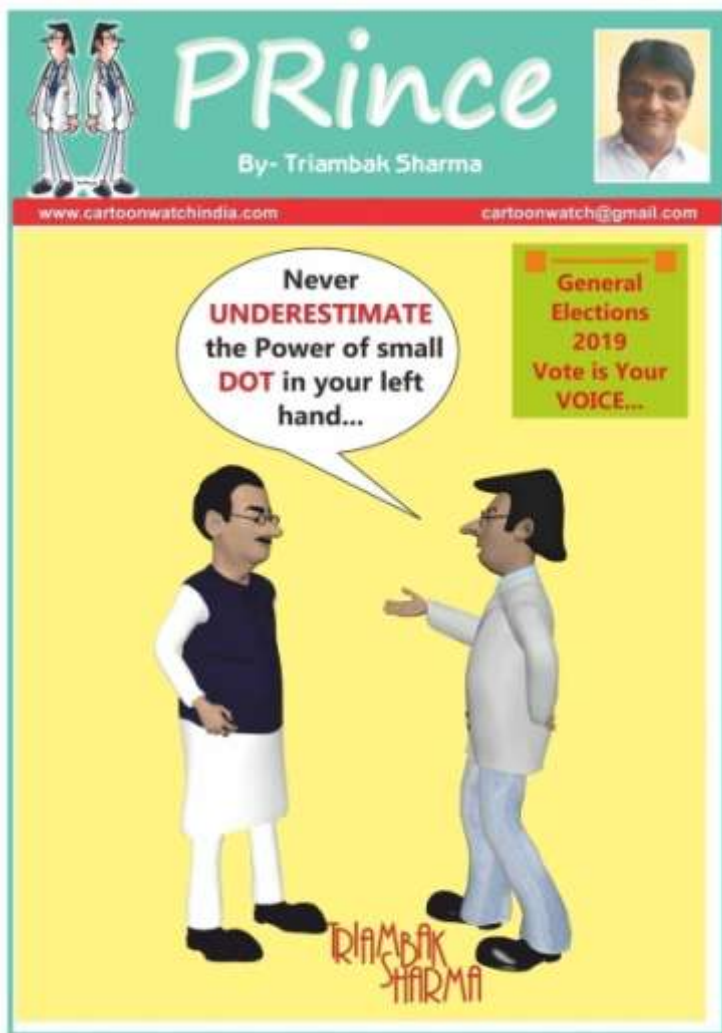
August 2018



Sep 2018



Jan 2019



March 2019



April 2019

Section VI: Media and Communication

Is Freedom of Expression Absolute?

Case Study 1: Charlie Hebdo

On 7th January 2015, the whole world was shaken by the shocking news of the massacre of 17 journalists and cartoonists of Charlie Hebdo, as well as some innocent people, by a group of Islamic terrorists in Paris. The reason was that in 2011, the magazine had carried some objectionable cartoons depicting Prophet Mohammed. It is reported that the magazine had published similar cartoons of icons of other religions, as well.

More than three million people including 40 world leaders participated in a march across France to protest against the

Charlie Hebdo issue



Support to Charlie

Against Charlie

killings. Journalists and cartoonists debated about “freedom of expression”. There were also counter protest marches in several parts of the world against the magazine, Charlie Hebdo for hurting the sentiments of a religious community.

Case Study 2: A Book in South India

Around the same time in South India, another controversy cropped up. Perumal Murugan, a Tamil writer published a book, ‘*Mathorubaagan*’ in 2010. In the novel, the author wrote about the childless married women of a particular community in a particular town in the state of Tamil Nadu in South India. He narrated how they used to have clandestine relationships with other men during the temple festival day and bear children thereafter. (Although the author had named the community and the town in his book, the same is withheld in this article.)



When the English translation of the book was released in 2014, the particular community raised protests and demanded the withdrawal of the book from the market. Writers and activists ganged up in defence of the author, claiming 'freedom of expression'. The entire town showed their solidarity against the author, by pulling down their shutters for a day in January 2015. Although the author was defended in the social media as well as in seminars held in the cities, none of the activists had the courage to defend the author in that particular town.

The Government formed a peace committee to address the crisis. The author later apologised for the contents and admitted that he did not possess any documentary evidence to support his claim. All his books were withdrawn from the market. In spite of these steps to resolve the situation, the topic was debated on various TV channels and other media, in their attempt to defend their freedom of expression.

How Far Does One's Liberty Go?

These two incidents have brought the issue of the freedom of expression to the forefront. Can there be an absolute freedom of expression for anyone in the world? There is a saying, "Your liberty to swing your fist ends just where my nose begins".

Does the media, the writers or anyone have the right to absolute freedom of expression because they express their

views in the public domain? Is there or should there be a restriction?

Double Standards of the Media

Very unfortunately, in India, the media exhibit double standards on such sensitive issues. One of the leading newspapers published 'I am Charlie' posters, with a photograph of marchers in Paris protesting against the killing. After printing nearly 50 percent of the newspapers, the editorial board realised that such photos might hurt the sentiments of a section of a community in India. The photograph was withdrawn from the remaining issues of the newspaper. An apology was also published to state "Some copies of XXXX (name of the newspaper withheld) dated January 18, 2015, carried an image of people holding copies of the French magazine, Charlie Hebdo, featuring the cover page with the image, which might have offended a section of our readers. The image was removed mid-way through the print-run. XXXX (name of the paper) regrets and apologises for the inadvertent and accidental use of the image - Editor".

Four days prior to this incident, the same newspaper had concluded their editorial stating, "The rights under the Constitution are designed to protect the freedom of expression of writers like Perumal Murugan who may seek to question uncomfortable truths from the past. It is a pity that a range of forces conspired to silence him".

A few years ago, there was a protest in the media against Salman Rushdie, who wrote some portions in his book that hurt religious sentiments. The same media defended M. F. Hussain, the artist who portrayed a Hindu goddess in what many people regarded as distasteful and disrespectful. They justified it as freedom of expression in art.

'Faith' is always a 'Faith'

Hinduism, Islam, Christianity, etc. are called 'faiths'. Billions of people worship their respective gods or their founders. Such allegiance and belief is built and followed only on faith

and it is often difficult to rationalise them scientifically. Any writing, picture or speech which portrays these faiths in poor light is likely to hurt the religious sentiments of these billions of followers. In this scenario, nobody can claim any absolute liberty that risks hurting the feelings of a large number of people. Protesting and defending such actions selectively is also unfair and not in good taste.

The same can be said of the cartoons published by Charlie Hebdo. The Islamic people have the right to decry such cartoons and take suitable legal actions against these publications. Unfortunately, the killing of the cartoonists by the terrorists has diverted the focus from the issue. Charlie Hebdo received the sympathy and support they did not deserve. They cannot claim the publishing of such provocative cartoons as their freedom of expression.

The Indian Constitution and IPC

Article 19(1) of the Indian Constitution provides freedom of speech and expression to all citizens of India. Article 19(2) imposes reasonable restrictions on the same, on grounds of security of the state, friendly relations with foreign states, public order, decency and morality, contempt of court, defamation, incitement to an offence, and sovereignty and integrity of India.

Sections 153A, 153B, and 295-298 of the Indian Penal Code contain the restrictions on the freedom of expression. It also includes the punishment for violation.

Freedom of Expression and Misuse of this Right

We often forget the fine line between freedom and misuse of a right. While freedom of speech gives a person the right to express his opinion, he should not forget his responsibility to respect religious sentiments.

The media too should address these issues objectively and fairly. They should not defend or protest selectively. The

freedom of any one person should not infringe upon the rights of the society in the name of creativity.

By K. Srinivasan, Editor-in-Chief
Source: January 2015 issue of Ezine PreSense

Time Management – Defining Priority of Tasks to Avert Crisis

In Time Management, there is a popular quadrant to define priority of tasks and arrange them appropriately in a planner.

Important and Urgent (1)	Important but not Urgent (2)
Not Important and Not Urgent (3)	Not Important but Urgent (4)

Box 1 Important and urgent – crisis activities

Box 2 Important but not urgent - planned activities

Box 3 Not important and not urgent - diversion activities

Box 4 Not Important but urgent - surprise activities

Another important feature is what is called the priority shift, which is a task's priority moving from one box to another. The most common shift is from "planned (Box 2) to crisis (Box 1)". The common reason for this shift is procrastination.

Time Management Case Study in Ramayana

In Kishkinda Kanda of Ramayana, Rama kills Vali and makes Sugriva the king of Kishkinda. Rama tells Sugriva to come back after the rainy season is over and help him in searching for Sita. Rama stays in a cave outside Kishkinda during that period.

Sugriva who became a king after a long time, indulged too long in sensual pleasures that he forgot to report to Rama in time. Rama got angry and told Lakshmana to go to Kishkinda and threaten Sugriva for life. When Lakshmana did the same, Sugriva apologised and fell at the feet of Rama. Rama was kind and relented. Hanuman and Nila, the commander in chief gathered a huge monkey army which reported at site.

Sugriva gave them orders and they went in search of Sita. Sugriva did not realise the priority shift i.e. the planned activity of searching for Sita after the rainy season, when postponed, became a crisis which almost cost him his life. In fact, a good time manager can move items from box 1 (crisis) to box 2 (planned) by analysing the root cause of a crisis and making a process correction for the next time. That is to say, he defines the "when, what, who and how" so that it is dealt with before becoming a crisis next time.

Source: September 2007 issue of Ezine PreSense

12 Tips to Draft an Effective Press Release

1. Use inverted pyramid style.
2. Confine the 'lead' to 25 words, using 5W and 1H method (where, when, why, who, what and how).
3. Provide proper caption, place and date
4. Write in third party language.
5. Remember, your immediate audience is the 'News Editor'. He should get interested in the story.
6. Avoid cliché, superlatives and advertorial materials, to please the boss or client.
7. Use quotes of competent authorities, relevant to the story.
8. Furnish contactable phone or mobile numbers of the persons, who can provide additional information.
9. Print the release on the letter head of the company. Duly signed press release may be sent through email followed by hardcopy through fax or delivery.
10. Provide duly translated press release to the regional language media,
11. Simultaneously post the release in the company's website under 'media room'.
12. Avoid sending bulky attachments to journalists, without their consent. Respect others bandwidth.

Source: October 2006 issue of ezine PreSense

Avoiding Miscommunication – An Interesting Procedure in the Indian Railways and the Airlines

Two persons, the loco pilot and the assistant loco pilot operate the locomotive. Due to the huge noise in the cab (where the pilots are seated), oral



communication between the two is likely to be distorted. To avoid this, Indian Railways follow a unique system. The assistant pilot would watch the signal positions and alert the main pilot.

When the assistant pilot sees the green signal about half a kilometre away, he would shout out loud like a military command, "Signal Proceed". On hearing this, the main pilot would also see the signal and shout back in a loud voice, again like a military command, "Yes Signal Proceed". They will also use the other commands like "Signal Caution", "Signal Attention", "Signal Danger" in the similar manner. In spite of the noisy environment in the loco, they are able to follow the commands correctly. It is reported that so far, no accident has occurred due to 'miscommunication'.

Any accident would have occurred due to 'misinformation'.



In the airlines, there are two pilots (the commander and the co-pilot) operating the aircraft in the cockpit. When one of the pilots would be in conversation with the ATC (Air Traffic

Controller), the other pilot would be monitoring the conversation.

Even at the ATC Tower, one officer would be giving commands to the planes and another officer would be monitoring, listening through his headset, to avoid any miscommunication and misunderstanding.

When ATC says "Air India 123 Mumbai Control Climb flight level three-six-zero", the pilot from the plane would repeat the same words, while the others would monitor their conversation. To avoid any miscommunication, they use three-six-zero, instead of three hundred and sixty.

***By K Srinivasan, Editor in Chief, PreSense
Source: September 2010 issue of Ezine PreSense***

Lord Rama's 7 tips for Presentation

An interesting incident about the components of presentation skills is narrated in Valmiki's Ramayana, the great Indian epic.



In Ramayana, Hanuman meets Lord Rama and Lakshmana for the first time in the forests and introduces himself and his master, Sugriva. This is the first meeting of Hanuman with Lord Rama. Impressed with the way Hanuman communicated, Lord Rama admires the

communication and the presentation skills of Hanuman.

In 7 *slokas*, Lord Rama explains the important aspects of communication skills of Hanuman that impressed him most. They are:

1. Hanuman spoke briefly to the point – not too long or too short. He spoke only as much as is necessary.
2. He spoke with clarity and without ambiguity.
3. He spoke without any grammatical errors.
4. He used the appropriate words that cannot be better expressed with any other word.
5. He spoke in moderate volume that is audible to the other person – not too loud or too feeble.
6. His pronunciation of words was correct. The way his pronouncing of the words sounded musical and pleasant.
7. His words touched the heart, making it effective communication.

We can apply the above seven skills are applicable too for effective presentation. Please watch the podcast interview

with Mr B S Raghavan IAS (Retd.) about the above 7 aspects.

<https://www.youtube.com/watch?v=GKPRqWsG-50>

Source: November 2010 issue of Ezine PreSense

Confusing Media Priority

Sheena Murder Mystery vs. GSLV-6 Launch

Last week (third week of August 2015), leading news headlines at prime time on the mainstream news channels screamed about the high profile and sensational "Sheena Murder" mystery. The other news headlines that followed included the capture of a terrorist, the victory of the Indian cricket team over Sri Lanka in their second test match and finally, just before fading away, came the news of the successful launch of the Geo-synchronous Satellite Launch Vehicle (GSLV) D6 which carried India's latest communication satellite GSAT-6. The "Sheena Murder" story continues to occupy prime time on TV even as we write this article (31st August 2015).



The "Sheena Murder" case then took over most of the main part of the "news in detail".

Reporters were sending real-time sound-bites

from different parts of the country where Sheena's family members were residing. The Sheena murder mystery was the primetime news in all the main news channels. There were analyses, debates, interviews, and speculations about what could have happened and what could happen. We had panelists who were unconnected with the case, and whose contribution to the debate was by way of mere speculations and inconsiderate character assassination of the suspects.

The satellite-carrying GSLV launched in Sriharikota in the state of Andhra Pradesh in South India, is intended to end India's dependence on foreign launch vehicles for its own

satellites. It was a project that took 10 years and 150 Indian industries which supplied its components – a proud moment for its scientists and the Indian people. Yet it barely managed as brief news in the fag-end of the news prime time.

Independence and Accountability

This brings us to the issue of independence, responsibility and accountability. Our democracy is perceived to be based on four pillars namely the executive, the legislature, the judiciary and the media. Each of these pillars functions independently but is also accountable.

- The legislature enacts the law and is accountable to the voters when the representative members go to the people during election time. The legislature is also monitored by the judiciary, which has in the past overturned out-of-place decisions passed by the legislature.
- The executive implements the law and is accountable to the legislature and the judiciary.
- The judiciary interprets and upholds the law. The accountability of judiciary is now being debated especially in these days of judicial activism and discussions are underway, for major reforms to make the judiciary accountable to the other pillars and the people.
- In this backdrop, the fourth pillar that is generally accepted in modern India is the media, with its social role as the “conscience keeper”. The other pillars, namely the legislature and the executive, are monitored by the media on behalf of the people. Even judicial functions are debated in media. Currently, the media is unaccountable to anybody. It is only in case of defamation by the media can one turn to the courts for relief. Even then, the judicial process being long and cumbersome, few people turn to the courts for

relief. For this very reason, the media must function under a self-governed responsibility.

News Channels

People are mainly exposed to the news that the media feeds them with. Over the years, the electronic media has taken over the print media in reaching current news to the people. It is able to provide real-time news, updated by the minute, through a variety of platforms such as debates, interviews, live coverage and spot sound bytes. News channels bring news to the living room of the common people on a 24/7 basis. The reporters of the news channels vie with one another in the field to be the first to broadcast the latest.

The media plays an important role in bringing true, unbiased and balanced information to the people. However, of late, it seems to have shifted its primary focus to topping Television Rating Points (TRPs). The media has begun building sensationalism into the prime news, or else sensational news became the prime news.

The media's sensationalised coverage of the incidence of rapes in India has damaged the image of our country at the international level. Some countries issued travel advisory to their citizens about travelling to India, as if the country was full of rapists. Statistics show that rapes occur more frequently in many other countries including the developed ones. (<http://www.more.com/news/india-rape-capital-world>; https://en.wikipedia.org/wiki/Rape_statistics). No doubt, this does not condone the act in India, but what is required is a fair and balanced portrayal of the situation by the media. Indians living in foreign countries face a tough time convincing the local people about the true and fair image about India.

During the recent pandemonium in the Houses of the Parliament, when some of the members disrupted the normal proceedings of the House, the media were up in arms, and rightfully so, pulling up the erring members and demanding that they did their job for which they were elected. Today,

the media needs to be pulled up too for the way they have been dealing with news and views.

Survey: 80% People Dissatisfied with Mainstream Media

The media may argue that they are bringing to the people what they want viz. sensational news. This is not necessarily the case as a recent survey revealed. A survey was conducted by a group of individuals from top academic, professional and corporate sectors called The Indian Iris, to gauge the public perception of mainstream media. It was conducted both online (email and Facebook) and offline among over 500 respondents, mostly in the age range of 18-40 years. (<http://www.opindia.com/2015/07/survey>).

The results show that a whopping 80 percent of the respondents expressed dissatisfaction over the quality of today's mainstream media, while 87% felt the media was biased. 70% found the prime time debates chaotic and meaningless while 23% thought the debates were more an entertainment than of any other relevance. When comparing the print media with the electronic media, the former had more loyalists with 22% finding it reliable, as against a meagre 4% for the electronic media. When the survey asked about the respondents' expectations from the future media, most of them wanted **fairness and transparency**.

Therefore, it certainly is high time the media did some introspection on why public trust has eroded to such an extent, going by the survey, and if it needs to re-focus on their primary role and responsibility. It would be a relief if the media could get back on track to doing what they are meant to do – bringing news and views that are true, balanced and unbiased.

by Susan Koshy, Editor

Source: August 2015 issue of Ezine PreSense

Spreading Rumours through WhatsApp and Other Social Media

Of late, it has become fashionable to post all and sundry information on social networking sites like Facebook and WhatsApp. In a nation with a tech-savvy Prime Minister taking selfies with other dignitaries, and encouraging his visitors to take selfies with him, this selfie mania is quite understandable. But when it comes to posting someone else's picture or a controversial opinion or spreading rumours, or even just information without knowing the genuineness and authenticity of the news, it becomes a serious issue.



For a nation marching ahead in Digital India, e-governance and digital communication, it is a

major concern.

- i) if the people are not aware of the repercussions of spreading falsehood in a social networking site, or
- ii) if the law is inefficient to curb such menaces, or
- iii) if the police is incapacitated technically or legally to handle such activities.

Earlier, there was a powerful Section 66A in the Information Technology Amendment Act, 2008 that stipulated punishment for sending offensive messages through communication services. It spoke of 'grossly offensive' messages of 'menacing character' and messages transmitted 'for the purpose of causing annoyance', knowing to be false, to deceive or mislead etc. All these expressions were best suited to define an offence of spreading falsehood, cyber stalking or even alarming the public through an electronic communication. Unfortunately, this section was repealed by the Supreme Court in an historic judgement in March 2015.

Spreading rumours and disturbing public peace continues to be a punishable offence, as per the 155-year old time-tested Indian Penal Code and the police still have the powers to book culprits who spread unfounded messages on a public post like Facebook or WhatsApp and cause public disturbance. It is better to think twice about the genuineness of a post in WhatsApp or about its necessity to be made available in a public domain. Those posting the photos of their private domestic functions should think twice before posting it on Facebook. Would they display their wedding album or the photo album of their domestic function at a railway station, and would they call the people on the street to their house to show them these photographs! Then, why post them in public domains?

Most of the media rejoiced when the Section 66A was removed by the Supreme Court in a misguided comfort that freedom of expression has been protected. The government in an overt move to project itself as a saviour of the freedom of press, did not defend the strength of the Section, and allowed it to die. Now, during the massive rains in the states of Tamil Nadu and Andhra Pradesh and in other similar critical situations, when people resort to and spread some unfounded news through WhatsApp, the same media is now concerned that a powerful weapon in the hands of the police has been lost.

On the question of posting some indecent selfies and socially disturbing photos on the networking sites, just as the originator of the news should behave responsibly and desist from posting them, the subsequent users too, who simply forward the mail or the information, should show the responsibility and discretion of a mature netizen.

By V Rajendran, Editorial Team
Source: November 2015 issue of Ezine PreSense

Incredible India or Intolerant India? Role of Celebrities and Media in Society



During the past three months, some celebrities and writers have been accusing a section of the Indian society of being increasingly 'intolerant'. They have also returned their awards in protest.

Strangely, the 'drama' of protests suddenly ceased soon after the Bihar Elections. Some suspected that this 'drama' was stage-managed to influence the electorate against a particular political party or parties. Interestingly, one of the activists who spearheaded the '*Award Wapsi*' movement has since received an Award.

It is also suspected that some of the communication agencies were also involved in this 'operation defame', with the support of some of the Indian media.

Blemishing India's Image

What is disturbing to know is that in the course of these accusations against a specific sect, India as a nation got a beating in its image in the global society as a country with serious national issues of intolerance.

The Aamir Khan Controversy

After a temporary lull following the Bihar elections, film actor, Aamir Khan stirred the controversial issue of 'intolerance' again with his off-the-cuff comment. At a

function he graced recently he said, "My wife Kiran and I have lived all our lives in India. For the first time, she said, should we move out of India? That's a disastrous and big statement for Kiran to make to me. She fears for her child. She fears about what the atmosphere around us will be. She feels scared to open the newspapers every day. That does indicate that there is a sense of growing disquiet." This statement re-ignited a nationwide debate and displeasure among some of the Indians, including his fans, for his lack of discretion in making a public statement of such sensitivity.

The renowned Indian music composer, A R Rahman endorsed the opinion of rising intolerance in the country. A R Rahman was referring to the '*fatwa*' issued against him by an Islamic body, for composing music for a film which carried a reference to their Prophet. The Delhi Government had to cancel his public performance in September 2015 because of the threat of the *fatwa*. Unfortunately, these comments were assumed and debated by the media as targeting specific communities.

Action and Reaction

Newton's third law states "every action has an equal and opposite reaction". This scientific inference is equally applicable to human behaviour. When someone provokes, the natural tendency is to expect a 'reaction' from the other person. The Godhra and the Post-Godhra, the Kashmir Pandits' exodus, the banning of selected books, the terrorist attacks including that of 26/11, the 1984 Sikh riots, provocative statements by political leaders and celebrities, can be quoted as examples. When celebrities and renowned writers make provocative statements, they incite reactions from the masses. The media rarely debates on the legitimacy of the 'provocation', and instead blows the 'reactions' out of proportion. This leads to tension and emotional unrest in the society.

Recently, the Karnataka Government made an impromptu announcement of the decision to celebrate 'Tippu Jayanthi'

without any section of the society demanding it. The State Government celebrated Tippu Jayanthi on the day of Deepavali Festival (10th November 2015), even though his date of birth was 20th November. Tippu Sultan, in spite of his reputation of having supported Hindu temples, he is also regarded negatively in several of the districts by different communities. To add to this provocation, a renowned artiste suggested publicly that Bengaluru Airport be renamed with Tippu's name replacing its existing name of Kempe Gowda, the Father of Bengaluru. These actions and suggestions provoked the sentiments of the majority community. They took to the streets in protest and a local leader died in a scuffle with the Police. Surprisingly, these so-called 'intellectuals' and the media blamed the protestors alone for the violence and not the Government which had incited the volatile situation. This incident created more tension in Karnataka and unnecessarily created animosity among the people who were living in harmony.

'DNA' of Indians

Traditionally, Indians have been known for their high level of tolerance in the society. '*Sarva dharma, sama bhava*' (treat all faiths equally) is the essence of the Indian culture. India has tolerated even the meanest of tyrants who destroyed the Indian culture. India has never invaded any country and had never indulged in enforcing its philosophies on others. In fact, India welcomed all faiths and respected them. This tolerance is embedded in the 'DNA' of every Indian, irrespective of the faith and religion he belongs to.

Indians across the country, celebrate festivals like Deepawali (Hindus'), Christmas (Christians'), Ramzan (Muslims'), Nauruz (Parsis'), Mahavir Jayanti (Jains'). At the ground level, people of different faiths have lived in harmony with each other. This has been the culture of India over thousands of years.

When the so-called celebrities and writers decide to comment on 'intolerance' in the society, they do not realise that they are generalising on the basis of specifics. The repercussion is

that the issue of 'intolerance' has been raised in the Parliament, setting aside some urgent and impending bills that needed to be tabled and decided for the benefit of the nation. Some intellectuals have even taken out a procession in Delhi against this issue, and submitted a petition to the President of India.

Role of Media

It is unfortunate that the Indian media's present trend is to focus more on their TRP ratings than national interest and professionalism. They therefore tend to sensationalise even a trivial law and order issue, exaggerating its implication. Even though every Indian enjoys freedom of expression, media and leaders should realise that freedom of speech is not 'absolute'. This freedom goes with 'responsibility and accountability'. The media and a section of the celebrities should realise the potential impact of their comments and actions, and therefore endeavour to exercise restraint and maturity in their behaviour. As role models and messengers, they should endeavour to diffuse rather than infuse tension in the society. The media should restrain from inciting emotions through provocative and subjective reporting of incidents in the country. If it must report, it should take care not to paint an emotional tone to the report. The people of national and international significance need to exercise restraint, caution and maturity, realising that what they say or do can impact an entire society and nation. Otherwise, they would be playing a dangerous game, either consciously or unconsciously, of inciting and dividing the people. They must be conscious that the nation is supreme and their fellow citizens of prime regard.

***By K. Srinivasan, Editor in Chief & Susan Koshy, Editor
Source: November 2015 issue of Ezine PreSense***

New Age Techno Strategic Political Communication

The 2014 General Elections witnessed a new way of political campaigning using various technology tools. The campaign model used in the western countries was tweaked to suit the Indian elections and to promote Narendra Modi. In any communication, whether it is a political campaign or corporate branding, a powerful message is sent to the audience through effective media tools, with the purpose of creating a positive or negative perception. According to S Narendra, Former Information Advisor to various Prime Ministers of India, it involves a strong strategy to successfully flight the message to the right audience through the right media, distinguishing it from the competing messages.



During the freedom movement, Mahatma Gandhi's Dandi March created a strong anti-British sentiment among the people. While Mahatma Gandhi was undertaking the Salt March in North India, Rajaji simultaneously undertook a Salt March in the south, to galvanise the entire country. In both the events, 'common salt' was the message and the 'March' was used as a 'Media' tool, to communicate the message to the people. For any successful campaign, the message should relate and appeal to the audience.

'Strategic' is a key word that represents the most critical input. A strategy is not very useful without such a critical input, an input that is a force multiplier. The strategic input can be an investment, person, alliance, a message, event or a decision.

The 1947-1990 Era

During this pre-liberalisation period, the radio and print media were mainly used. The ruling party had the opportunity of using the public sector organisations to promote the achievements of the Government through their advertisements.

During the first General Elections held in 1952, Jawaharlal Nehru and the Congress Party contested on a symbol of 'two bullocks tied to a yoke' and won massive majority. In the later days, Indira Gandhi used the 'Cow and Calf' symbol and the Janatha Party used 'a Farmer Within a Wheel'. These symbols were in themselves powerful messages to connect with the people and appeal to them.

In 1971, Indira Gandhi used the powerful message '*Garibi Hatao*' and swept the elections. During the 1989 elections, VP Singh used the powerful message of the 'Bofors Scandal' against Rajiv Gandhi. BJP used the 'Ram Mandir' issue to increase the tally.

During this period, the political parties used conventional methods of the print media. At that time, only the All India Radio and Doordarshan were the electronic media available and mostly used by ruling party. Political campaigns were based on public meetings, personal contact with voters, wall posters, banners, notices, etc. Cinema, stage dramas, street plays and cut-outs were used by political parties in the south to promote their philosophies. MGR, Karunanidhi, Annadurai, NT Ramarao, Jayalalitha and Raj Kumar emerged from the film industry to acquire political power.

The 1990-2014 Era

After the economic liberalisation in 1991, the emergence of the television (TV) media changed the campaign strategies. Political parties started owning TV channels to promote their parties. In 1993, Sun TV was started as an entertainment

channel with an agenda of promoting the DMK political party. Later on, many more parties started their own channels.

In 1996, the BSP leader, Kanshiram slapped Ashutosh (now a spokesperson of AAP), then reporter in NDTV, when he was asked some uncomfortable questions. That led to the political parties thinking in terms of engaging professional agencies for handling the media and appointing spokespersons to engage the media.

The BJP and the Congress parties began using Professional Public Relation (PR) Agencies like Good Relations India and Perfect Relations to handle media relations on their behalf. After 2004, national parties began using professional agencies in the states they were ruling (mostly in the north and the west), for election campaign.

Soon, national parties set up their own Internal Campaign Managers, to professionally handle the campaign. Arun Nehru (Congress) Arun Jaitly (BJP), Narendra Modi (BJP), Pramod Mahajan (BJP) and Jairam Ramesh (Congress) emerged as good campaign managers.

The 2004 General Elections saw the emergence of 'theme-based advertisements'. BJP heavily campaigned under the theme 'India Shining', employing the Advertising Agency Grey, reportedly spending around Rs.600 crores for the campaign. For the first time, the Indian Elections witnessed a corporate type of advertisements. Although the Congress was weak, they used the campaign '*Aap Ko Kiya Mila*' (What Did You Get). Although the economy was upbeat and BJP had spent a huge amount their campaign, they could not form the Government in 2004. Experts opine that the negative campaign run by BJP on Sonia Gandhi as a 'foreigner' coupled with the 'India Shining' campaign of BJP could not win them the elections. The common voters could not connect with the 'India Shining' theme.

Technology was used only to a limited extent in the 2004 General Elections. BJP projected Vajpayee as PM Candidate.

For the first time in the Indian elections, a candidate was projected as a PM candidate.

After 2004, Political Communication Strategists emerged in a small way to support individual leaders at the regional level.

In the 2009 General Elections, both BJP and Congress used technology tools like the social media, SMS / telephone campaign, etc. Advani and Dr Manmohan Singh were projected as PM candidates of BJP and Congress respectively. BJP was the major user of technology tools. BJP lost the elections.

Till 2009, there was no 'paid media' concept. Political parties appointed advertising agencies to plan and place their advertisements.

The 2014 (Post Modi) Era

Narendra Modi (BJP) used technology tools like the social media, 3D hologram, mobile phones, smart phones, etc in Gujarat Assembly Elections in 2012.

Political Techno Strategies were used in the 2014 General Elections. Professionals like Prashant Kishore supported the BJP campaign. A more professional approach towards the campaign, like survey, big data analytics, and micro-management of the campaign through technology were used. New technologies like Augmented Reality (QR code) and Virtual Reality (like hologram) were also used.

The campaign branded Narendra Modi as PM candidate. Slogans like '*Acche Din*' (Good Days/Times) and '*Aap ki Bar Modi Sarkar*' (This Time, It's Modi's Government) attracted voters nationwide. They involved the youth through the social media. The campaign was supplemented by a large number of road shows (public meetings) in different states. The Congress could not match the technology-driven campaign of BJP. BJP and its alliance parties won the election with a big margin, leaving the Congress disappointed.

The same model was used in other state elections held subsequently in Maharashtra, Haryana, Uttarakhand, Bihar and Delhi. The BJP lost in Delhi and Bihar, indicating that creating 'hype' alone might not be enough to win elections and that it should be coupled with field work. This new type of campaign will be adopted in the 2016 Assembly Elections. Some of the regional political parties have begun employing the expertise of professionals for their campaigns.

After 2009, media houses were encouraging 'sponsored news' or 'paid news' to propagate positive and success stories. Although the Election Commission and the Press Council of India have banned the 'paid news' concept, excepting a few media houses, many others have been promoting this concept for earning revenue. Ironically, the same media houses shout about 'values and ethics', while they go about to the extent of publishing/telecasting sponsored 'opinion polls' in favour of one party or the other.

Traditional Vs Modern Campaign

In the traditional campaign, the political leaders and workers had personal interaction with the voters. After the introduction of the technology campaign, personal interactions were lost. Since 80% of the voters are not connected with technology tools, traditional campaign model requires to be supplemented. The technology tools are useful for creating a 'brand image'.

In the traditional model, the leaders emerged from the grass root level with knowledge about the nuances of various problems. Vajpayee, Advani, Karunanidhi, MGR, NTR, Kamaraj, Pranab Kumar Mukherjee, Narasimha Rao, Bansilal, Mulayam Singh Yadav, Lallu Prasad Yadav, Mayavati, Mamta Banerjee and Sharath Pawar are examples of such leaders who had emerged from the grass root. But in the technology model, leaders are emerging from the social media, eg. Arvind Kejriwal, and Narendra Modi as PM candidate).

Hype is created through intensive campaigns using the social media and other technology tools, the projected leader runs the risk of losing his image when the campaign ceases. In other words, the leaders or the brand created out of this hype is unable to stand on their own but rely on a virtual standing. For this reason, a fair mix of both traditional and technology strategies is necessary.

Presently, political parties suffer from a bad culture of hooliganism, rowdyism, etc. In future, it is hoped that a balance can be maintained in the political culture, with the emergence of new-age educated leaders.

By K Srinivasan, Editor in Chief
Source: January 2016 issue of Ezine PreSense

Snippet About Oscar Award



The Academy Awards or popularly known as the Oscars is a group of artistic and technical honors given annually by the Academy of Motion Picture Arts and Sciences (AMPAS) to recognize excellence in cinematic achievements in the United States film industry as assessed by the Academy's voting membership. The winners under the various categories are awarded a copy of a statuette, officially called the Academy Award of Merit, which has become commonly known by its nickname "Oscar." The awards, was first presented in 1929 at the Hollywood Roosevelt Hotel

The awards ceremony was first broadcast on radio in 1930 and televised for the first time in 1953. It is now seen live in more than 200 countries and can be streamed live online. The Academy Awards ceremony is the oldest entertainment awards ceremony. Its equivalents - the Emmy Awards for television, the Tony Awards for theatre, and the Grammy Awards for music and recording – are modeled after the Academy Awards.

A total of 3,048 Oscars have been awarded since the inception of the Award through its 88 editions. The statuette, made of gold-plated britannium (a specific type of pewter alloy, composed of tin, antimony and copper) stands on a black metal base. It is 13.5 in (34.3 cm) tall and weighs 8.5 lb (3.856 kg). It depicts a knight rendered in Art Deco style, holding a crusader's sword, on a reel of film with five spokes. The five spokes represent the original branches of the Academy: Actors, Writers, Directors, Producers, and Technicians.

As of 2016, eleven Indians have been nominated for a total of fourteen Oscars, five Indians of whom have won a total of six Oscars. Three Indian films have been nominated in

the Best Foreign Language Film category. As of 2016, at least one film has been submitted by 118 countries.

Sukruti Narayanan, Editorial Team
Source : February 2017 issue of Ezine PreSense

Evolution of Advertising

The world of advertising is a billion-dollar global industry today. However, it evolved from very humble beginnings, the history of which dates as far back as 4000 B.C. when people used symbols marked on goods to identify them with the sellers. The evolution of advertising is an interesting sequence of events starting from the age of the sign language to the present world of abbreviations and taglines. Incidentally, the word "advertising" comes from the Latin word, *Advertere* to mean "turn towards".

The stages of evolution can mainly be classified into the Pre-Industrial Age and the Post-Industrial Age. The advancements in the advertising industry was manifold and a hundred times more rapid during the period after the 1900s as against the period before the 1900s.



**Printing Press
invented in 1440**

In the pre-industrial age, people were obviously unaware of the concept of mass production as there was no machine involved. People worked on the barter system, *ie.* exchange of one good for another instead of exchange of goods over money. "Word of mouth" was the means to "spread the good news" about a product. In order to differentiate among the goods like cattle, grain or any type of goods possessed, people used to mark them with

a symbol, otherwise called branding. Since the common people did not know how to read or write, they recognised symbols and understood the 'town criers' (people carrying messages from one place to another and announcing them). Paintings on walls and carvings on stones were other common forms of advertisement.



**First Magazine published in
London in 1731**

When paper was invented by the Chinese in 105 A.D., it was mainly used to pad articles such as bronze mirrors, until the advent of the paper mill in Europe in 1275 A.D. In 1440, a German named Johannes Gutenberg invented the Printing Press which gained popularity. But it took over three decades before the first "Poster Ad" was brought to the world. These Ads were placed on church doors in London. By the middle of the 17th Century (1650), the first newspaper Ad appeared, which offered "reward for finding 12 stolen horses".

In the beginning of the 18th century, the Boston Newsletter asked its readers to place Ads for real estate, ships or goods for sale. In 1731, the first general-interest magazine was published in London. At that time, advertisers just played with headlines to garner attention.



First paid advertisement in 1836

The 1800s resulted in the onset of the Industrial Revolution where animals were replaced by machines and goods were manufactured in large quantities. In order to differentiate identical looking mass-produced goods, people resorted to advertising to promote their brands. In 1836, the French newspaper, *La Presse* was the first to include paid advertisement in its pages. The same was soon followed in magazines too. This led to the opening of the first advertising agency in Philadelphia, USA by Volney B Palmer in 1850.

As modes of transportation advanced, the advertising world saw billboard Ads and transit Ads emerge. A commission-based Ad agency was started 1869 by Francis Wayland Ayer. And with this, advertising took a professional leap into a world bombarded by Ads, billboards, sound bites, byte slots and so on.

In India, advertising started well before the 18th century with hawkers calling out their wares, right from the days when cities and markets first began. The advertising world has since evolved in a big way so that the Indian advertising arena scores high among its global competitors.

By Sukruti Narayanan, Editorial Team Member
Source: July 2017 issue of Ezine PreSense

Evolution of Advertising - The Branding Boom Era

The evolution of advertising during the pre-Industrialisation period was discussed in the previous edition of this e-magazine (PreSense July 2017). The changes that occurred in the 1900s were dynamic when compared to the evolution that took place over the preceding period of 700 years (between 1200 A.D to 1900 A.D).

Industrialisation resulted in mass production of goods which were similar in nature. This forced merchants to think of ways to project their products as the unique one. They chose advertising as the medium to reach out to people *en masse*. The idea of branding and attractive packaging began to play a key role in sale of goods.

Creativity in branding expanded from print designs in newspapers to aerial advertising of the products, using air balloons; for example, balloons displaying the baby formula brand by Mellin's Food in 1902.

There was progressive advancement every year in technology and this worked in favour of improving branding. In 1903, the Commercial Pacific Cable Company laid the Pacific Telegraph Cable. Nobody thought then that this would help in tele-marketing. The domestic electricity was standardised in 1910, and this created a market for household appliances. Within a decade, America's first radio station, KDKA was launched in Pittsburgh in 1920. This became a medium for branding, and the advertising industry turned out to be nearly a \$3-billion industry by then. In 2016, the global advertising spend was over \$500 billion.

By 1940, television (TV) sets were manufactured in the United States of America, Britain and Germany. After World War II, the sale of TV sets began to boom and the first TV commercial was by



First Television advertisement

Bulova Clocks. (picture)

This opened advertising to a different level and creativity played a vital role in drawing attention. Creative teams in the ad world collaborated with artists and copy writers to make interesting film clips.

In 1975, the video cassette recorder (VCR) became popular among the masses. The viewers could watch their favourite programmes without being interrupted by advertisements. The personal computer (PC), introduced by IBM in 1980s, shook the ad world as the attention shifted from TVs to PCs. In the 2000s, mobile phones were the talk of the decade and it emerged as a vital gadget over the decade. This resulted in integrated marketing becoming important in order to increase sales. With the advent of the Internet, which had over 400 million users in the 2000s, the digital age was born. The "wealth of information created a poverty of attention". This made the concept of brand positioning critical.

There was a paradigm shift from exploiting the traditional ad space to an information overload on the Internet and this resulted in the development of many ad-free channels and applications. Spamming became a very serious problem and people started blocking online ads. The social media tools like FaceBook, Instagram, Twitter, LinkedIn, WhatsApp, Pinterest, SnapChat and many other applications became a medium to reach the target audience currently.

Today, the scenario is such that companies pay consumers to grab their attention and they have gone to the extent of creating sponsored programmes for the viewers. Now, customers find their brand rather than *vice versa*.

By Sukruti Narayanan, Editorial Team Member
Source: August 2017 edition of Ezine PreSense

Fake News – At What Cost?



The country and the world itself seems to be reeling under the threat of fake news which is making its rounds, often without the consumer's knowledge about the manipulation. What is fake news?

Fake news is deliberately fabricated information, spread through traditional or digital media with the malicious intention to mislead. Fake news differs from incorrect news which is inadvertent. In case of incorrect news, we usually see an immediate corrigendum and an apology. Fake news on the other hand, is distributed with the intention to deliberately mislead and misinform. The intentions are often for profit through increased eyeballs to the sensational news or to malign one's reputation.

Types of Fake News

There are several types of fake news:

- **Satire** is information that is obviously misinterpreted for the amusement of the readers/viewers/listeners. It is the least harmful of fake news as both the consumer as well as the broadcaster are aware of the intent to amuse rather than to deceive. An example

is the stand-up comedy, or the satirical television shows.

- **False connection** is where the accompanying headline or photo does not connect with the main news content. Since headlines capture the curiosity, interest and attention of the consumer, a sensational but incorrect caption for example, drives the consumer to read/view the contents, resulting in more eyeballs.
- **Misleading content** is information reproduced selectively so as to distort the message to suit the agenda of the broadcaster (either to sensationalise or to malign). For example, someone's quote is misinterpreted by the reporter to distort the intent of the quote.
- **False context** is where genuine information is reported in a false context. In a recent incident where some politicians took up a protest by fasting and boycotting a popular cricket match, a mischievous social medium propagated an archived and unrelated photograph of one of the politicians snacking at the cricket stadium.
- **Imposter content** is fake information with its source falsely credited to genuine sources.
- **Manipulative content** is morphed or doctored content, especially photographs, to give false credibility to the fake news.
- **Fabricated news** is 100% deliberately manipulated information, with the absolute intention to deceive and harm.

Threat of Fake News

The risk of fake news circulation and the threat of damage that it can cause is real-time now with the emergence of the digital era. During the 'print media only' era, the publication had almost an entire day to verify and corroborate the information sourced. Today, with information and updates streaming on a 24/7 cycle, verification and authentication is a tough challenge. Besides, with the access of the internet

and its technology to the common man, anyone and everyone has become a citizen journalist.

It is interesting that some fake news, especially the imposter content types, have positive objectives. For example, some valuable and wise advice is incorrectly attributed to revered personalities like Dr Kalam so that they are noticed and possibly imbibed in life for good practice. No doubt, this does not condone the mischief behind the act of propagating fake news.

Dealing with Fake News

Spotting fake news is neither easy nor fool-proof. But there are suggestive ways:

- The source of the news and the author if available is a reliable point for verification of genuineness.
- Using one's discretion and intelligence, one can evaluate the news content.
- Verifying the contents with multiple other sources helps in checking its genuineness.

The society is increasingly aware of the menace and notoriety of fake news. But it is difficult to curb it without compromising on the freedom of expression, a fundamental right in democracy. Speaking to Shri Vinoba Bhoopathy, advocate and spokesperson of the political party, *Pattali Makkal Katchi* (PMK), he referred to Article 19(1)(a) of the Constitution of India which guarantees the right to freedom of speech and expression to all its citizens. "This freedom is one of the fundamental principles in any mature democracy and this includes the freedom of press," he said. "To ensure that this constitutional right is upheld without any bias, it is important that the State or any arm or agency of the State of the country should not have any control over the media. Any compromise in this safeguard would lead to a potential threat of degradation of democracy." Shri Bhoopathy recalled the plight of the Fourth Pillar (the press) during the Emergency Rule in India in the mid-1970s, when the freedom of the

press was severely curtailed. The democracy of the country was then at stake.

It was in this backdrop that the media put up a strong objection when a recent circular about fake news, was issued by the Ministry of Information and Broadcasting, Government of India. The circular had stated that in case a journalist was accused of creating or propagating fake news, his accreditation with the Press Information Bureau would be suspended pending an inquiry by regulatory bodies of the media. Severe penalty was spelt out in case of confirmation of the allegation. This circular was suspected to be a precursor to an Emergency-type curtailment of the freedom of expression, which was subsequently vetoed by the people of India in the elections, by voting against the ruling government.

Article 19(2) of the Constitution of India does provide for "reasonable restrictions on the provisions of Article 19(1)(a)". It specifies that the freedom spelt out in Article 19(1)(a) is not absolute but puts a limitation on the power of the legislature to restrict the freedom. There is ground for restriction on the freedom of speech and expression in case of any threat to:

- the sovereignty and integrity of India
- security of the State
- friendly relations with foreign nations
- public order
- decency or morality
- contempt of court



- defamation
- incitement to an offence
- sedition

Bhoopathy asserted that in case of propagation of fake news, there is sufficient teeth in legal recourse for redressal and punitive action.

Shri Vinoth Poovalingam, web news portal management expert from New Delhi said that there are fake news detecting software and agencies that can scrutinise the contents for authenticity and genuineness, using 'Clipbins' and 'Rolls' for tracing and sourcing the news under scrutiny. Similarly, image-processing software can detect morphed and doctored images. Unfortunately, these actions can be used in post-mortem analysis only and not pre-emptively. The results can be used for catching the criminal after the crime, and also as reference for assessing and evaluating the credibility of the sites and links that had promoted the news. Poovalingam believes that such a system of evaluation through analytical assessment of the media platforms, can help in rating these platforms and websites and media houses in scales of credibility, somewhat like the ISO standards or the CIBIL credit ratings.

Bhoopathy believed that an inherent self-regulatory mechanism is the sustainable solution to this menace. The question is what can motivate the media to adhere to self-regulatory standards. Although transparency in the ownership pattern of the media houses can help in dealing with the big houses that might appear skewed in their views, in most cases of fake news, it is the little known and small media sites that are notorious. It is difficult to keep a track on them or curb them on time.

A senior journalist from New Delhi was of the opinion that fake news in most cases was a point of view that could be in divergence with a popular assumption. He also felt that these were inherent features in a democracy and it was up to the

individual to exercise discretion in believing or disbelieving these points of view, sometimes labelled as fake news.

In conclusion, it is pertinent to point out that just as Article 19(1)(a) gives the right of expression to every citizen, including all media, the provisions of Article 19(2) are equally applicable to every citizen including the print, broadcast and internet media. Every citizen – all inclusive – must remember that every right comes with corresponding responsibility.

The Editorial Team of your e-magazine, PreSense has on board a cyber law and cyber security expert to take care of the adherence to the cyber laws applicable to digital journalism, ensuring ethical responsibility. As in any other profession, the journalist – professional or citizen – is bound by the moral and ethical standards demanded of him.

By Susan Koshy, Editor-in-Chief
Source : April 2018 issue of PreSense

The Traditional Indian Newspaper Still Preferred

Ancient Indian literature or the Hindu literature is known to have existed in two forms viz *Smṛiti* and *Śruti* forms, *Smṛiti*



meaning 'which is remembered' and *Shruti* meaning 'which is heard'. The ancient Hindu scriptures, *Vedas* and *Upanishads*, are considered to be originally in *Shruti* format and canonical (sustaining, authentic about its pronunciation and meaning, and ordained to be recited and understood as they are presented). In other words, *Vedas* have been 'verbally documented' and recited by the *guru* to his *Shishyas* (students), who in turn, memorise and chant them. Thus, these scriptures were passed on over centuries and generations. The printed formats of *Vedas* and other related literature followed much later.

The history of printing in the world dates back several centuries, much before the Christian era (BCE), and makes interesting reading. Wooden block seals, pottery imprinting and textile printing were used in many parts of the globe, especially in the Asian countries. Palm-leaf manuscripts used

as writing material and dating back to several centuries BCE, are still found in many ancient South Indian villages, especially in the southern parts of Tamil Nadu State, and parts of Nepal too. They contain treasures of information on astrology, astronomy, administration, governance, and many such social subjects, passed down from ancient scholars and sages.

The First Print Medium

Printing in its present format, is an invention of the 15th century. As a tool for news propagation, it is believed that the first printed weekly newspaper called '*Relation*', was published in 1605 in Antwerp in Europe, as a collection of distinguished and mostly positive news. The print media has had a great influence in the political administration of nations, sometimes even instrumental in the falling of some governments and rising of some parties, resulting in a paradigm shift of public perception.

In India, especially during the Freedom Struggle, the print media and the broadcasting medium (viz. the radio) served as tools to convey the views of the leaders of the Freedom Struggle to the general public. The two factors for the success of the print media were the content (to ensure readership interest) and advertisements (to ensure revenue generation). Increase in readership ensured increase in advertisements.

The Emergence of e-Newspaper

In the digital world and electronic era today, with digital money replacing cash, commerce giving way to e-commerce and all the world going the 'e-way', it is no wonder that print newspapers were facing the threat of closure, with the taking over by e-newspapers and digital journalism. Laptops and mobiles with high speed internet connections are gradually replacing the conventional print media. Today, if someone says that 'sipping a cup of coffee in the morning and reading the newspaper, delivered by the newspaper boy, is the first item in the day's agenda', he would be relegated to an outdated generation. With speedy and easy tools of communication to reach the 'last mile' (the reader), the e-

newspaper is now accessible through an app on the reader's mobile. The economic viability and commercial feasibility is another reason why print media is on the wane.

Status of the Newspaper in India



In India, however, the situation is interestingly different. According to an Indian Readership Survey (IRS) conducted by MRUC (Media Research Users Council) and RSCI (Readership Studies Council of India), vide its Report dated 19th January 2018, new readers of newspaper during 2017, have increased to more than 110 million, almost 40%

rise since the last IRS of 2014. The increase is said to be mostly in the rural and urban areas, thanks to increase in literacy in these sectors. Advertisements in newspapers too are on the rise. The report adds that only 4% readers prefer reading news online. Interestingly, FICCI (The Federation of Indian Chambers of Commerce and Industry) has projected a growth rate of around 8% for the print media in India for the next two decades.

It is a welcome trend that books and book fairs continue to draw large crowds in most parts in India. Books are still considered elegant gifts. As a matter of principle, your eMagazine, PreSense and its associated entities are proud to present only books as compliments to its dignitaries and guests at all their events, as against the customary shawl, bouquet or other mementos.

Therefore, digital news portals are not yet a threat to the print media in India. Currently, e-newspaper is complementary to the print media, with better visual effects in the form of high-resolution images and video supplements.

For a discerning and conservative readership that India prides itself of, the printed newspaper is still not passé and is still sought after, for its credibility and reading pleasure, even though it is at the cost of speed and instant news....somewhat like experiencing homemade food with its emotional satiety, as against fast food, as a convenient alternative in our lifestyle on the fast track!

by V.Rajendan, Editor
Source : Oct 2018 issue of PreSense

Doordarshan to Celebrate 60th Birthday in 2019

Doordarshan's Inception & Journey

Television (TV), a great home entertainer, made its entry in India, around 60 years ago, on 15th September 1959 with an experimental transmission from Delhi. A make-shift studio, a low power transmitter and just 21 community television sets, virtually changed the concept of entertainment and news coverage in the country, happening 12 years after its independence.



The State-owned All India Radio (AIR), a precursor to Doordarshan, provided it engineering and programme professionals to kick off a big revolution in broadcasting history in India. An hour-long daily transmission of news bulletin launched Doordarshan in the first major effort of expansion in 1965. In less than seven years, in 1972, television services were extended to the second city – Mumbai. There was further progress in quick succession so that within three years, ie. by 1975, television stations were set up in Calcutta, Chennai, Srinagar, Amritsar and Lucknow for transmission of Doordarshan.



During 1975-76, the Satellite Instructional Television Experiment (SITE) brought television programmes through a borrowed satellite to 2400 villages in the most inaccessible areas. The television services were then de-linked from radio in 1976, and each unit of AIR and DD was placed under the management of two separate

Director Generals in the capital. Doordarshan became an independent entity as a National Broadcaster.

In 1982, just before the Asian Games were held in the country, Doordarshan switched from a Black & White broadcaster to colour transmission, ushering in a boom of colour TV manufacturers into the country. This was primarily due to the pioneering efforts of the then Prime Minister Indira Gandhi and her trusted Information and Broadcasting Minister Vasant Sathe, who made it his lifetime zeal.

Doordarshan soon became a Public Broadcast Terrestrial Television Channel, run by Prasar Bharati, a board formed by the Government of India. It is claimed to be one of the largest broadcasting organisations in the world in terms of the infrastructure of studios and transmitters. Prasar Bharati (Broadcasting Corporation of India), established on 23rd November, 1997 is India's national public broadcaster. It is a board, nominated by the Government of India. It comprises Doordarshan Television (DD) and All India Radio (AIR).



Recording a programme

Following the demand for autonomy of the government-owned broadcaster in line with those in many other

countries, the Parliament granted autonomy to Prasar Bharati in 1990, although its official enactment had to wait until 15th September, 1997.

In 1995, Indian Television made history by agreeing to a US \$1.5 million annual fee and 50% of advertising revenue, when it exceeds US\$1.5 million, to allow US-based CNN (Cable News Network) to broadcast twenty-four hours a day via an Indian satellite.

Doordarshan's Content of Entertainment Programmes

The state-owned Doordarshan (DD) offers a bouquet of national, regional, and local services for its domestic viewers. The migration of Doordarshan from Black & White transmission to a colour one, kicked off with the live telecast of the Independence Day broadcast of the Prime Minister's message on 15th August, 1982, followed by the Asian Games. The 1980s saw Doordarshan breaking new ground in entertainment with US-styled soap operas with serials as *Hum Log* (1984), *Buniyaad* (1986-87) and mythological dramas like *Ramayana* (1987-88) and *Mahabharata* (1988-89), catching the fancy of the Indian citizens. Millions were glued to these programmes on Doordarshan. Other popular programmes such as a weekly telecast of Hindi film songs dubbed *Chitrahaar* and *Rangoli* followed by crime thrillers like *Karamchand*, *Byomkesh Bakshi* and *Janki Jasoos* changed the face of not only television, but also entertainment in Doordarshan's programming history. All these serials had an underlying positive message, upholding tradition and moral values, and strengthening the fabric of Indian culture. From the mid-1990s, the cable TV brought about a home entertainment revolution.



Shahrukh Khan in Fauji (1988)

In its chequered history, Doordarshan was the first to present engrossing family social dramas with *Waghley Ki Duniya*, *Yeh Jo Hain Zindagi*, *Nukkad*, *Rajni*, *Shanti*, and the list goes on. Alope Nath and Kanwaljeet became big film stars after *Buniyaad*. Super Star Shahrukh Khan started his acting career humbly in Doordarshan, enacting a soldier's role in the TV series *Fauji* (1988). He went on to doing more roles on TV before embarking on a successful movie career with Bollywood. DD changed his life and fortunes.

Today, more than 90% of the Indian population have access to 49 Doordarshan programmes through a network of nearly 1400 terrestrial transmitters. Over 46 Doordarshan studios produce these programmes. Doordarshan operates 19 channels - two All India channels, 11 Regional Languages Satellite Channels (RLSC), 4 State Networks, an International Channel, a Sports Channel and two channels (DD-RS & DD-LS) for live broadcast of parliamentary proceeding, making it the biggest state-owned broadcaster in the world.

On DD-1 national programmes, regional programmes and local programmes are carried on a time-sharing basis. The DD news channel was launched on 3rd November 2003, replacing the DD Metro Entertainment channel that provided a 24-hour news service. The Regional Languages Satellite Channels have two components viz. the Regional Service for the particular state, relayed by all terrestrial transmitters in the state, and additional programmes in the regional language on prime time and non-prime time, available only through cable operators.



Popular news readers of

The sports channel is exclusively devoted to the broadcasting of sporting events of national and international importance. DD broke new ground by telecasting rural sports like *kho-kho* and *kabaddi*, which no private broadcaster dared to telecast for fear of not raking in

enough revenue.

With the advent of private TV networks, Doordarshan came under criticism for its alleged low-quality programmes and sometimes even poor quality telecast and presentation. Also, as DD was conceived as a 'No-Profit-No-Loss' organisation, unlike private channels, the state-owned broadcaster did not have and get the requisite push and motivation from its authorities for better programming.

DD's Challenges and Opportunities

Doordarshan was then exposed to competition, struggling to compete with a network of privately-owned quality entertainment channels powered by commercials, and the latest technology. Doordarshan went on a war-footing to recover lost ground, but like most state-owned entities, it soon became lacklustre in comparison to the glitz and glamour of its competitors from the private domain, viz Zee, Sony and Star Plus.

However, in spite of all these challenges, Doordarshan still retains its position as the most trusted and unbiased broadcaster of news and clean entertainment. Viewers prefer to listen to DD News for authenticity in a world of news broadcasting, now rocked by fake news through the electronic media. In this regard, one is reminded of AIR's 9 o'clock news bulletin and its programme, Spotlight. Doordarshan retains the premier position with its credible news and views and analysis by experts, even as successive governments with different editorial policies come and go.

DD has carved a distinct identity in sixty years, despite the changing face of TV broadcasting in India. DD hopes to achieve greater heights in its 60th foundation year.

***By T.N.Ashok, Consulting Editor
Source : Feb 2019 issue of PreSense***

Doordarshan (DD) Which Touched Indian Households

"DD - operationally profitable, globally one of the largest TV networks, equipped with the most modern technology with nearly 200 million viewers"

– DD Director-General, Supriya Sahu IAS

(As Doordarshan gears up to celebrate its 60th birthday this year, Doordarshan's Director-General Ms Supriya Sahu IAS, spoke to our Consulting Editor, T.N. Ashok about the growth, challenges and future outlook of DD).

Excerpts from the Interview:

India is emerging as a major leader in TV broadcasting with a humongous viewership. Can you trace the journey of Doordarshan from a small TV station in the 50s to a large TV network today that caters to millions of viewers across the nation?

Supriya Sahu: Today, Doordarshan is one of the largest broadcasters in Asia and in terms of our broadcast capability, it is comparable with United States, China or any other country.

Doordarshan always stood for credible content, based only on factual and correct information, for generations of viewers from the beginning till today. We have delivered meaningful programmes that have changed and impacted the lives of people positively, and also championed national progress. It



Ms Supriya Sahu IAS,

has helped build national consciousness, and promoted economic empowerment of the country.

We broadcast in more than 18 languages and make programmes in hundreds of local dialects. Most of our regional channels have doubled their viewership. A loss-making DD is now profitable. It has generated operational profits in the last two years.

- DD Free Dish, India's only open access Direct-To-Home (DTH) service provided free of cost, is servicing nearly 33 million households and is expected to reach 46 million by 2020 (*Ref: E&Y Report, 2017*). With just a one-time investment of Rs.2000/- for installing DD Free Dish, there is no subscription cost for life thereafter. DD Free Dish offers an interesting bouquet of 80 channels with a combination of news, sports, entertainment, music, movies and infotainment. DD Free Dish is popular with people who are not able to afford the expensive bouquets of private channels.
- DD News has created a niche for itself as it stands out against the cacophony of the private channels. In an era of hyper-sensation, DD News still retains its credibility, such that if you want to watch news as it should be, you just need to tune in to DD News.
- In December, 2018, using modern technology, DD launched 'DD Roshni' – an education channel on the DTT (Digital Terrestrial Television) Network in Bangalore City.
- Doordarshan has been an active member of the Asia-Pacific Broadcast Union (ABU) and pioneered the first ABU Dance Festival in 2017, hosted in partnership with the Government of Telangana and with the participation of 14 international teams from 9 countries. The second ABU Dance Festival was held in New Delhi during March 9th-17th, 2019 with 120 dancers from 12 countries showcasing 20 dance forms. This was telecast live on all the flagship channels of ABU countries.

- In addition to these prestigious assignments, Doordarshan has also undertaken several co-production projects including 'Future Schools Project' with EBS (Educational Broadcasting System), Korea.
- Our programmes are finding resonance with our viewers. An example is DD Science, a high-quality science programme.
- In the 'free to air' space, there is no content for children, which private channels offer. DD presents "Galli Galli Sim Sim", in line with the famous international children's programme, Sesame Street.
- Another feat is the Mahila Kisan Awards, where we brought 104 women farmers to our studios, and televised stories about them in the form of a reality show. DD recognised them, awarded them, and highlighted their stories to inspire other farmers.
- For the younger generation, we launched a Rock Band Show, showcasing upcoming bands from smaller places.
- In the last three years of our tenure, we have built up a strong social media presence. All the channels are on Twitter, Facebook, and YouTube, and we are on Instagram. That is something that has connected us to the young viewers and the next-gen citizens in a big way.

In its 60-year journey, how has DD been able to upgrade technologies that give the network a competitive edge over others?

Supriya Sahu: DD has a state-of-the-art technology for upgrading its broadcast infrastructure.

- Our studios have the latest HD (High Definition) cameras. We acquired about 300 HD cameras, upscaling the capability of 67 studio centres.

- One of DD's biggest strengths is live broadcast from India's remotest parts. Apart from large and complex broadcasting events of national importance like the Republic Day, Independence Day etc, we have huge in-house professional expertise in live broadcast coverage of news, sports, and entertainment. This is one of the corner stones of DD's broadcast capabilities.
- We have 30 Outside Broadcast Vans and 96 DSNG (Digital Satellite News Gathering) vans spread across the country for quick deployment. We also have backpack cameras for news coverage.
- DD is the earliest broadcaster to ride on ISRO satellites GSAT-15 and GSAT-17, for digital transmission – one at Mumbai and the other at Delhi. Today, most of our live telecasts are in HD format, and this includes the news bulletin and the coverage of international events. We have 24 channels in our kitty, and they are all on satellite and on cable and DTH.

What is the outlook for Doordarshan for the future?

Supriya Sahu: Our programming is primarily in the nature of public broadcasts. We need to make programmes which are good for the community, impactful, thought-provoking and targeted at nation building. It should touch the lives of the people in a positive way. So, with sufficient government funding, we do not need to worry about TRPs (Television Rating Points). A holistic outlook for each of the channels should help a comprehensive content overhauling.

Thanks to the Rs 200 crore (Rs 2 billion) funding by the government to revamp the content, and with the support of the board of Prasar Bharati and under our current Chairman, I think the future path for DD is now laid out well.

***by T.N.Ashok, Consulting Editor
Source : March 2019 issue of PreSense***

Need for a National Media Policy

The Indian Constitution provides for the “right to freedom of speech and expression” under Article 19(1)a, subject to reasonable restrictions mentioned in sub clause (2). The Indian Constitution provides this freedom of speech and expression to every citizen equally, which includes all the media.

After the emergence of technology, many people in India have the mistaken notion that the ‘freedom’ given by the Constitution is absolute. This is incorrect. In the past, we have seen some writers, artists and journalists claiming this freedom as “absolute”. Reasonable restrictions are provided for, in the Constitution.

Emergence of the New Media

In the earlier days, we had only the Government-controlled broadcasting media (All India Radio, Doordarshan) and select print media newspapers and magazines. With the development of technology, many more television channels have emerged. 200 television channels with a viewership of 20 million in early 2000 have now grown to 900-plus authorised channels with a viewership of 900 million. This does not include the unaccounted cable channels across the country.

In the past decade, the emergence of internet technology has changed the entire communication model. Today, every person in the world with a mobile device has become a ‘journalist’ and is capable of disseminating information to millions of people. This phenomenon has posed challenges to the governments across the world. Fake news and false information spread quickly, throwing more challenges. Many times, even the mainline media like television and print media carry information generated by the internet media.

Many democratic countries do not yet have an effective regulation mechanism for the media, even though every country has a ‘self-regulatory’ mechanism in place. Countries

like Nepal, Norway, the European Union and Sri Lanka are now moving towards industry-led regulation with statutory powers.

Regulatory Mechanism in India

In India, content and carriage of any media is governed by the Indian Telegraph Act 1885. In the course of 130 years, the Indian Government has made several laws to regulate the print media, cinema, television and internet. All these regulations deal with the technology (platform or carriage) and not the contents. India does not have a statutory regulatory mechanism for delivery of contents, excepting for the print media. There are self-regulatory mechanisms set up by the industry bodies themselves.

The Press Council of India, a statutory body set up by the Government of India, regulates the contents of the print media. It functions only as an advisory body and does not have teeth. Broadcast industry bodies like Indian Broadcasters Foundation, News Broadcasters Association and News Broadcasters Federation have set up their own self-regulating bodies for their members and brought out codes for contents. The Internet and Mobile Association of India is a self-regulating body for "online curated contents". Media like YouTube and other social media tools are outside the purview of any regulatory mechanism. Nobody has control over the inappropriate contents delivered through such media.

The Advertising Standards Council of India (ASCI), is a self-regulating body in advertising, ensuring the protection of the interest of consumers.

All these self-regulating bodies do not have the statutory powers to punish any erring media. Media experts say that world over such self-regulatory bodies have failed for various reasons. They say that unless these bodies have legally-backed statutory powers, they may not be able to function effectively.

The Inter Ministerial Committee (IMC) set up by the Ministry

Present Position of Convergence of Media

Sector/ Year	2017	2018	2019 (Estimate)	2021 (Estimate)	CAGR 2019-2021
Television	660	740	815	955	8.8%
Print	303	306	317	338	3.4%
Filmed Entertainment	156	175	194	236	10.6%
Digital Media	119	169	223	354	28.0%
Animation and VFX	67	79	93	128	17.4%
Live Events	65	75	86	112	14.0%
Online Gaming	30	49	68	120	35.4%
Out of Home Media	34	37	41	49	9.2%
Radio	29	31	34	39	8.0%
Music	13	14	16	19	10.8%
	1476	1675	1887	2350	12%

*Note: All figures are gross of taxes (INR in billion) for the respective calendar years
Data courtesy : FICCI*

of Information and Broadcasting can examine any complaint against any channel, with the authority to stop the broadcast.

The Government of India has set up the Electronic Media Monitoring Centre (EMMC) in 2008. They monitor the contents of all the TV channels and the radio. No data is available about any action taken by them for any violation.

The media and the entertainment industries are the most vibrant industries in India, generating huge revenue and employment opportunities. They are the cultural ambassadors for the country's values and stories for many foreign countries as well. As per the FICCI-EY 2019 report, the Indian media and entertainment sector is pegged to grow to INR2.35 trillion by 2021 (US\$33.6 billion), after witnessing a growth of 13% in 2018 to reach INR1.67 trillion (US\$23.9 billion). As per this study, online gaming and digital media will be growing fast in the coming years in India. How India is going to regulate the content then is to be debated.

Need for an Integrated Authority and Policy

All the professionals in India (except media persons), like advocates, doctors, chartered accountants, cost accountants and company secretaries have their own legally backed regulatory mechanism operated by their own respective industries. Because of this, these professions are highly

respected and they have progressed considerably. We have policies for the telecom, education, banking, and various other segments. It is high time that we think of a Media Policy too that can take the media industry to the next level.

Many senior journalists feel that due to the lack of a proper media policy and regulation, the media industry is suffering in spite of its great potentiality. Many journalists have lost their jobs in the recent days. The media industry should be able to function like any other professional industry with a proper policy and regulation in place.

During the past decade, due to socio political changes, the media industry has migrated from 'Institutions' to 'Individuals'. Besides, many of the rules framed during the British days are not in line with current trends. When we talk about media policy or regulation, it does not mean "censorship" as was implied and implemented during the Emergency. If India needs to protect the 'freedom of speech and expression' provided in the Indian Constitution, the Government has to convert the industry-operated self-regulatory mechanism into legally backed statutory bodies. The mechanism can be operated by the industry itself with more statutory powers to punish the violators. This would help not only to enhance the quality of the contents but also help in the growth of the Industry. India is already the third largest media market in the world, next to USA and China, with high potentiality to grow.

The Government of India can set up a Committee under the chairmanship of a retired Supreme Court judge with experts from different media and fields, to codify the 'draft policy' relating to convergence of platforms, ownership and delivery of contents. The Committee can study the policies framed by other democratic countries. The draft policy can be further debated by the public and industry before adoption.

by K. Srinivasan, Publisher and Managing Editor
Source : July 2019 issue of PreSense

Section VII: Science and Technology

What are Cyber Crimes?

Phishing is the process by which someone obtains private information through deceptive means of authenticating credentials, in order to assume someone else's identity. The phisher, viz. the person doing the act of phishing, sends an email and directs the victim to a fake web-site (which appear genuine, say like your bank's website) and advises the user to divulge his User ID for internet banking along with other private information like password, credit card number and possibly the 3-digit code number in the credit card (called the CVV or the CVC). With such information, the phisher then accesses the actual web-site and does an e-commerce or e-banking activity on the victim's bank account.

Skimming is the process of copying the magnetic strip information from a credit card into a small handheld electronic device, called skimmer (now available in the form of contactless and remote facility too). It scans and stores the card data from the magnetic strip. Such information is then passed on to the people engaged in the manufacture of counterfeit cards. With the name of the bank and the card-holder (already available at the shop, where the skimming was made), this information will then be embossed in the card and the card looks like original! Fraudsters then indulge in shopping (either in person or on-line) using the fake cards. The victim will get to know of it only after he receives the card statement from the bank.

Computer hacking is the act of getting into someone else's computer involving some degree of infringement on his privacy and causing damage to information like computer files or any software stored therein. Unlike most computer crimes and computer misuse which are clear cut in terms of actions and legalities like software piracy etc, hacking is a little more complicated to define and describe as an offence. Hacking may result in a simple invasion or annoyance to a computer, or to the extent of illegal destruction or compromise, affecting the information therein. Ethical

hacking (which is now being taught as a subject) involves the use of technical knowledge by individuals, willing to take the risks required to become a true "hacker" to explore the weaknesses in any system and confirm that the computer system is really robust enough to withstand any hacking attempt.

Spoofing means maliciously deceiving someone. IP Spoofing refers to the transmission of data with a forged (spoofed) source Internet Protocol address with the purpose of concealing the identity of the sender or impersonating another computer system, thereby duping the receiver to believing that the mail has been sent by the system whose IP address has been forged. Similarly, email spoofing refers to the act of sending an email to make it appear as if it came from somewhere or someone other than the actual one by altering the header information after connecting to the mail server.

Cyber Stalking means causing harassment to someone through the computer. Commonly reported forms of stalking include sending repeated emails or SMS to a victim causing mental disturbance or mental agony affecting the behaviour of the victim in a psychological manner. Similar to receiving obnoxious and objectionable telephone calls, the victim receives emails and SMS from the fraudsters, causing embarrassment that affects his mental health.

By V Rajendran, Editorial Team Member
Source: October 2008 issue of Ezine PreSense

An Overview of Current IT Security Issues, the Future Trends and Possible Actions.

1. Cyber Attacks

The Internet or World Wide Web (www) is also called Cyber Space. This space connects various computer networks across the World (and in future to the other planets that we might occupy!!). Like each individual, each network is distinct in terms of the IT systems used, the way it is set up, configured and managed. This heterogeneous nature of the network has many weaknesses that are prone to attacks. Cyber terrorism, cyber warfare and cyber vandalism are examples of such attacks. Many such attacks are happening today albeit less in magnitude and in the future, we may face some intensive attacks that could cripple the cyber space.

Co-ordinated efforts from the Computer Emergency Response Teams (CERT) across the world with timely alerts to user communities could mitigate risks from this threat.

2. IT Vulnerabilities

Vulnerabilities in IT systems are holes or errors that are exploitable. They are there due to poor designing or poor coding or both. When the vulnerability is exploited, it results in security violation such as compromise of the IT system, service disruption or obtaining higher privileges. Such vulnerabilities are the root cause of many of the security issues mentioned in this column.

Efforts such as Common Vulnerabilities and Exposures (CVE), and National Vulnerability Database (NVD) provide a glimmer of hope for combating and reducing these threats in the future. Based on the knowledge from various hacking/virus/worm related incidents, it is possible to develop secure systems by following the secure coding practices.

3. Lack of Monitoring, Security Testing and User Awareness Programs

Though this is an organisational issue, monitoring of suspicious activities in the network, is performed using IT

systems. Information Security is predominantly based on preventive and detective controls. Monitoring assists in devising proactive and reactive actions, based on events. Security testing involves vulnerability assessment, penetration testing and security policy audits. The trends indicate that many organisations do not have or do not follow such procedures.

User awareness in terms of Do's and Don'ts based on organisational security policy must be created. These three activities, if followed regularly, could minimise the risks from the threats mentioned in this column.

4. Identity Theft

Identity theft refers to stealing one's identity for wilful gain such as money, fame, and power, and for criminal activities. A simple identity theft is stealing a password. Banks and financial institutions are defrauded by impersonation; confidential data are stolen from the Government, military and corporate for terrorism, warfare and espionage due to identity theft. In the future, this issue will assume gigantic proportions as more and more devices join the network bandwagon and establish their identity beside humans.

Digital Certificates, Biometrics such as finger print, voice, face and retina recognition systems, and Radio Frequency Identification Devices (RFID) are some of the effective solutions to this issue and we can expect advancement in this area.

5. Malware

Malware refers to (Mal)icious Soft(ware) and as the name implies, the purpose is to cause harm to the systems or steal information. Viruses, worms, and spyware such as key loggers, Trojan horses, root kits etc., are examples of malware. The present trend is alarming and statistics show that hundreds of billion dollars are lost due to malware.

Statistics show that more than 50% of online users have reported spyware infection to their systems. Malware exploits system vulnerabilities and human weaknesses. Organised crimes such as planting malware in legitimate websites as online banking, so that it gets automatically

downloaded to the computers of the innocent users, are on the rise. Technologies like Web2.0 are also prone to malware infestations.

Future trends indicate the onslaught of more sophisticated malware, and there is need for heightened awareness, using the legal copy of the operating system, anti-virus and personal firewall by the users.

6. Botnet

Botnet refers to malicious networks managed by Computer Robots. They attack vulnerable computers (called zombies) in the network and use them for attacking other computers, stealing information, storing and transmitting illegal data such as porn movies or pirated and malicious software. We see proliferation of distributed botnets that automatically switches the controlling computer robot to another computer or network in case of network block by the service provider/law enforcement agencies. This trend is going to increase, and controlling botnets will be a big challenge. There is an unofficial estimation that one quarter of the computers connected to the Internet will be compromised and will become part of botnet. User awareness and periodical vulnerability and activity scanning of computers are necessary for combating this threat.

7. Unsolicited Commercial Email

Spam, as it is popularly known is an issue that drains the network resources such as bandwidth and storage space. Besides, many human hours are wasted in download time and trashing such emails. Important security issues are that spam is used for phishing, pharming and distribution of malware. The root cause of the problem is the way the email is transported and exchanged across millions of mail servers across the world and the weak spam controls. The present trend is more on using zombie computer to send spam as more and more service providers are shutting down spam servers. However, many of the spams originate from servers hosted in countries like Russia, China and Philippines.

Using spam filters, and co-ordination from the countries that do not have stringent laws against spam, is the way to go for solace from this menace.

8. Mobile and Wireless Attacks

The business and user community increasingly adopts mobile devices and wireless networks. Mobile commerce such as banking and shopping are seeing rapid advancements. Common attacks that are perpetrated against such devices and networks include Bluetooth Attacks, SMS Spoofing, Smishing (SMs phISHING), compromising the WEP keys as well as setting up ad hoc networks. In the future, attack sophistication and vectors are bound to increase and this is one area that is going to give a constant nightmare to IT and Security professionals.

User awareness is the key to prevent many such attacks besides stronger authentication mechanisms.

9. Web Based Social Engineering

Social engineering refers to the art of inducing a user to inadvertently perform an action for the purpose of obtaining sensitive information, such as passwords, credit card or bank account information etc. Web-based tactics involve spoofed emails that appear to have come from legitimate entity such as your bank, asking for personal details, Nigerian scam, illegitimate websites constructed as a lookalike of a legitimate site or in the form of giving away free software, music or video. With the advancement of social networking sites, instant messaging and mobile phone based internet communications are some of the hot spots that will spur this activity to dangerous levels.

People are the weakest link in a security chain. A common sense approach to any access or communication with known/unknown entity on the web must be practised.

10. Peer-to-Peer File Sharing

This refers to the direct communication between two or multiple computers for sharing files such as software, music, video etc. Since this activity involves direct access to the file system of the shared computer, the chances of implanting

malware is very high. The concept of trusted source in such a system is weak. Criminal networks operate in the domains that perpetuate organised crime. The trends are more geared towards underground suspicious activities.

Participating in an insecure peer-to-peer file sharing networks must be avoided.

Law Governing Your Computer

Information Technology Act 2008 – India: Section 43A

Where a body corporate, possessing, dealing or handling any sensitive personal data or information in a computer resource which it owns, controls or operates, is negligent in implementing and maintaining reasonable security practices and procedures and thereby causes wrongful loss or wrongful gain to any person, such body corporate shall be liable to pay damages by way of compensation to the person so affected.

(There are similar provisions in other countries like USA and UK)

Source: April 2009 issue of Ezine PreSense

Origin of Email

In 1965, Massachusetts Institute of Technology (MIT) was the first to demonstrate the use of the email system known as MAILBOX. This was before the internet came into existence and therefore, this system was used to send messages to different users on the same computer.



Ray Tomlinson

In 1971, Ray Tomlinson, a former MITian, was working on TENEX operating system as an ARPANET contractor for BBN Technologies. While using a local email program called SNDMSG, Tomlinson created the first email application when he patched a program called CPYNET to the existing SNDMSG. This introduced the capability to copy files through a network and Ray notified his colleagues by sending them the first email. It is said that the first message sent by Ray was 'QWERTYUIOP', which is formed by typing the first row of characters on a standard keyboard. Mr Tomlinson sent this historic message to himself from one machine to another, sometime in October 1971.

The history of email addresses can also be attributed to Tomlinson. He chose the '@' symbol to provide an addressing standard in the form of "user@host", which is in use till date. This is why Tomlinson is called the 'father of email' and is credited with its invention.



The room from where Mr Tomlinson sent the first email message from one computer to the other. (Photo courtesy: <http://tenex.opost.com/>)

Source: January 2011 of Ezine PreSense

Cyber Security Information Sharing - the US Initiative

The Cyber Security Information Sharing Act (CISA), originally introduced in July 2014 and under discussion ever since, was approved last month, after some modifications. It is now made easier for companies to share personal information with the government in case of cyber security threats in USA. The information-sharing channels in the US, created for responding quickly to hacks and breaches, along with intelligence and law enforcement agencies can now enforce surveillance without a warrant.

Since the cyber security threat information is shared, it is feared that the threat indicators can be used as evidences to prosecute cyber crimes. This is being condemned as an infringement on the data privacy of individuals in USA, with the privacy advocates opposing it. With the powers vested, the President can now set up 'portals' for agencies like the FBI and National Intelligences, and all such information could be used for law enforcement investigations.

In cyber security worlds, this is being considered a significant and landmark legislation in cyber crime prevention.

It is felt that an Act with similar provisions suitable to the Indian environment should be in place in India too. Alternatively, the Cyber Crime Co-ordination Centre should be operationalised at the earliest to help speedier investigation of cyber crimes and sharing of cyber crime related information among the main stake holder government agencies. More details are available in the following link.

<https://www.congress.gov/bill/114th-congress/senate-bill/754>

By V Rajendran, Editorial Team
Source: January 2016 issue of Ezine PreSense

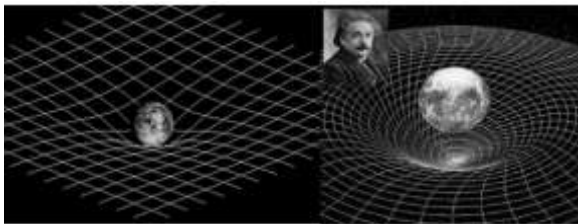
Gravitational Waves - Discovery of the Century

The announcement by the Scientists on 11th February 2016 about the discovery of 'Gravitational waves', the ripples in the fabric of space-time, electrified the world of astronomy and scientists. This is the discovery of the century as the gravitational waves were predicted by Albert Einstein in 1916. In 1979, National Science Foundation funded California Institute of Technology and Massachusetts Institute of Technology to detect the waves. They set up Laser Interferometer Gravitational Observatory (LIGO) detectors to conduct the study.

Prime Minister Narendra Modi lauded the role of Indian Scientists who were part of the team that discovered the 'Gravitation waves'. "The historic detection of gravitational waves will open up new frontier for understanding of universe. Hope to move forward to make even bigger contribution with an advanced gravitational wave detector in the country", he tweeted.

Gravitational waves explained

We know that a stone tossed up, falls back to Earth because of its gravitational force that draws the stone to the earth. We have the Newton's law to explain and measure the force of gravity. This explanation is sufficient for theoretical understanding. What really happens is the following:



Imagine that two of us hold the four corners of a handkerchief so that the piece of cloth is now a plane surface.

Now, imagine placing a very heavy iron ball at the centre of the handkerchief. The shape of the handkerchief gets curved as shown in the figure.

The curved space around a massive object like a star is called Space-Time fabric, since it is not just a change in length-breadth-width that occurs. Time changes too in this curvature. Therefore, a stone thrown above the earth travels back through this curvature of space-time and ultimately touches the central massive body (Earth), an action we term as the stone falling back on Earth.

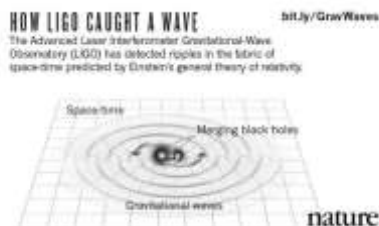
If the central massive object remains at rest, or moves at a steady and consistent speed, the curvature of the space-time remains at rest, or moves at the same speed. But if the central mass moves with acceleration, then the changes of curvature of this space-time fabric generates gravitational waves. These waves propagate in space at the speed of light.

Einstein predicted the existence of these gravitational waves in 1916 itself as a consequence of his General Theory of Relativity.

Detection of These Waves

About 1.3 billion years ago, two black holes, each having a mass of about 30 times our Sun, attracted each other and collided with each other producing intense gravitational waves. INTENSE means these waves have a wavelength measuring millions of miles but with a sub-millimetre height.

To detect such an extremely weak gravitational wave, the Laser Interferometer Gravitational Observatory (LIGO) Team in USA made a pair of coherent laser beams to travel in mutually perpendicular paths of about 4 km each in length and recorded the changes in the path lengths by observing an unambiguous interference pattern when these gravitational waves were crossed in the observatory. Had Einstein been alive today, he would have been amazed at the technology that enabled this detection.



The Significance of This Discovery

- For the first time we have direct evidence of a black-hole, rather two black-holes of about 30 solar masses colliding with each other, as predicted by Einstein.
- The gravitational waves that are now detected matched exactly with what Einstein had predicted.
- Where Does This Discovery Lead Us To?
- Just as we have optical and radio telescopes to observe our Universe in-depth, we can now observe through gravitational-waves-interferometers, which can give us unblurred details.
- Our Universe has energy distribution roughly as follows: 68% dark energy, 27% dark matter and 5% normal matter.

Remember that we are all made up of normal matter and hence currently, we can perceive only this 5% of the Universe. With this discovery, we can now probe the dark matter too since they have "mass" and can give rise to gravitational waves.

We can see the Universe close-up to 2 or 3 seconds of its formation! The gravitational waves will pave the way to look in to such a nascent Universe. (please note that we are now able to look at the Universe only after 0.28 billion years of its birth).

Benefits to a Common man

When the experiment at European Organization for Nuclear Research popularly known by the French acronym CERN, Geneva, was organised to detect the "GOD" particle, the scientists had the necessity to interlink many of their research computers, which gave the world the "World Wide Web" (www). The LIGO Labs in India (to be established soon) can now bring distinct advantages to our scientists, researchers, students, the government and the entire country.

The precision of the measurements involved in the detection of gravitational waves are so high that

- early warning systems for disasters like tsunami will be absolute, correct and more reliable on the dot.
- analysis and understanding of DNAs at the bond-level is possible and this can throw more light in understanding healthy and diseased conditions, leading to stunning biological discoveries.
- it will give an unprecedented ability to process really big data, giving a direct advantageous edge – the following list is only indicative and not complete – to our military, disaster management and crisis management.

Please watch this video to get the visual details.

<https://www.youtube.com/watch?v=hbbMpe17fzA>

By Dr R. Jagannathan, Editorial Advisor

Source: February 2016 issue of Ezine PreSense

Booking Domain Name for a Company



The head of a popular organisation in India, one day found that the domain name of his organisation was registered with some other person, who was

handling its website management. A few months earlier, the head of the organisation had requested that web designer to book a domain name like *www.mydomain.com* and paid the charges. The web designer instead of booking the domain name in the name of the organisation, booked it in his name. When the head of the organisation requested the web designer to change the registration in the name of the organisation, he was reluctant to oblige. Since the domain, including the user ID and the password of the booking, is in the name of the web designer, the organisation has to depend on the web designer always.

As per the international guidelines of The Internet Corporation for Assigned Names and Numbers (ICANN), anybody can book the domain name with any extension, barring a few names. The commercial and non-commercial organisations run the risk of their full name or short name being used for domain name booking by any third person, on payment of the required charges. Here are a few tips for secure registration of the domain name, without the risk of being misused.

1. Select your domain name, like 'mydomain'. This name should be short, reflect your organisation and should be easily remembered.
2. Go to any domain booking registrar like Godaddy, Networksolution, Register, etc. Search for your domain name. If it is available, create an account with them with

your full name, organisation, postal address, contact numbers, etc. Then you can book your domain name online, paying the required charges through credit card.

3. Every domain name has three contact details viz. Registrant, Admin and Tech. Ensure that the name of your organisation is given as the contact detail for all the three contact categories. Even if you are advising the web designer to book your domain, advise him to book it only in the name of the organisation or the real owner, to avoid any future complications.

4. Once the domain name is booked in the name of the organisation, the web designer will need to visit the control panel of the domain name only when he has to change the DNS Settings or the Name Server Settings. The annual renewal charges can be paid online, when you receive the alert from the registrar.

5. Keep the user ID and the password of Domain Registrar safely and do not share them with others. Using the same user ID, you can book any number of additional domains.

6. To ensure against any misuse of the name of your organisation in the future, you can register several domain names with different connotations like *mydomain.com*, *mydomain.net*, *mydomain.org*, *mydomain.in*, *mydomain.co.in*, etc. All the domains can be pointed towards your main site. If yours are a popular company or organisation, and if you are holding only one domain name *mydomain.com*, another person can book a domain name *mydomain.in* and could create trouble for you. This kind of



parked whitehouse.com site

activity is called 'cyber squatting'. Since cyber squatting has not yet been categorised as an offence under the cyber law, the responsibility

of protecting the domain name vests with the genuine owners.

Interestingly, whitehouse.com is not with the American Government. It was used as a porn site earlier and now they have parked the site without content. Whitehouse.gov is the official site of the President of India. There are instances where several leading Indian organisations do not own domain names with other extensions. Such organisations run the great risk of mischief makers who might purchase these domain names, causing embarrassment.

After reading this article, please visit *who.is* and get the registration details of your personal and official domain names. If there are any discrepancies, you can rectify them immediately and safeguard the interest of your organisation and yourself.

Web designers have no moral or legal authority to book domains in their name on behalf of the organisation when you have asked him to book on your behalf.

For any additional information, contact info@cysi.in

V Rajendran, Editorial Team
Source: March 2016 issue of Ezine PreSense

The Safety of Women in Cyber Space

Are Ladies Safe in Cyber Space?

A month ago, I received a telephonic call from a lady television anchor, informing me about the harassment she was facing from some people, who abused her on Twitter, using indecent language. She had saved the screen shots of those tweets. Rajendran, PreSense Editorial Team Member and a Cyber Advocate, and I suggested to her to file a complaint with the Cyber Crime Police. Last week, she called me up again to lament that in spite of her lodging a complaint with the Police with proof of the tweet screen shots and the names of the offenders, the Police was not sure how to deal with the case, in the absence of Sec 66A (of the Information Technology Act 2000), which was struck down by Supreme Court in March 2015. The Police across the country have been receiving such complaints regularly and they take action by invoking the Indian Penal Code (IPC) to book the culprits. She also said that there were many young girls being constantly abused in the cyber space of the social media. She added that some of them had to take extreme step of even leaving their jobs, unable to handle the harassment by the abusers.

She then raised a relevant question. "When I walk on the street, and if someone uses abusive language against me, the Police can arrest the offender under IPC for 'eve teasing'. If an offender does a similar offence in the cyber world, the law is handicapped to arrest the offender. How are you going to protect your sisters and daughters from this menace?" Her question, choked with emotion, prompted our Editorial Team to write this Cover Story.

We conducted a quick online survey to gain some insight into the extent and intensity of such cyber harassment. Based on the responses, we discussed the issue with many experts and activists on the subject.

Problems Faced by Women

In the survey, many of the women respondents complained about the abusive, indecent, derogatory and vulgar calls, messages and images they received through mobile phone calls, the social media and the WhatsApp. All these abuses are called 'cyber stalking'.

One of the Chennai-based lady respondents reported that a photographer, whose services were engaged for her wedding, took some close-up pictures of her in suggestive poses. The photographer then posted one of those pictures on his Facebook page. When she got to know of this mischief, she complained to the Police. However, the police expressed helplessness in taking action against him, as the photographer was politically connected and used his political connections to avoid criminal action against him.

Recently, a senior male student of a reputed college uploaded some photographs of some girl students, on his Facebook page, displaying them with vulgar captions. When these were detected, the student was dismissed from the college and the pictures were removed from the social media page. The affected students and the college refrained from complaining to the Police to "safeguard their reputation".

In another instance, a male member of a software company proposed his love to his lady colleague, who rejected him. In revenge, the male colleague uploaded photographs of her on various porno sites, with her mobile phone number. She was displayed as a call girl, available for service. The lady colleague experienced acute embarrassment and agony because of his vengeful act. Many of the millions of daughters of India, who are harassed on a daily basis, suffer in silence. Many of them do not go to the Police, and instead tolerate the harassment as their "fate".

Section 66A of Information Technology (IT) Act 2000

In 2009, the Government of India inserted Section 66A in the Information Technology Act 2000, empowering the Judiciary to punish a person with imprisonment up to three years for

any grossly offensive and menacing messages. Unfortunately, in a "twist in the tale" episode, a lady law student challenged this Sec 66A as unconstitutional because this section was misused by the police in one of the states to arrest innocent persons who posted critical comments about social and political issues and political leaders on social networking sites. The Supreme Court thus struck this section down, saying such a law "hit at the root of liberty and freedom of expression, the two cardinal pillars of democracy".

The entire media in India, including several women organisations celebrated this decision as winning their newfound 'freedom of expression'. Many others, who were less optimistic about the wisdom of this reversal, remained silent. The Cyber Society of India however, had expressed openly in the media that striking down Sec 66A might open threatening challenges for women in the future, compelling them to ask for re-introduction of this provision.

Expert Views

S. N. Ravichandran of Cyber Society of India says that the right of redressal has been sacrificed at the altar, for the sake of the right of speech and expression. He adds that at the time of the judgement, he had appealed to the women journalists and women activists to oppose the judgement. None of them seemed to realise the implications then.

Sonia Arun Kumar, a popular Digital Journalist says the Government should restore Section 66A to protect the women victims.

Dr. Debarati Halder, advocate and cyber crime victim counsellor, says that Sec 66A was a good law that was unfortunately misused and abused. She feels that the existing laws are not adequate to address the many forms of cyber offences, even though some of them can be tackled through IPC.

S. Balu, Additional Superintendent of Police (Retired), who investigated a similar case of harassment on cyber space and won the first conviction in India under IT Act, says that the Police feels handicapped to take action against the offender due to the absence of the Section 66A. There are many laws in India that are being misused on a daily basis in many parts of India. Striking down those laws is not a solution. The Court could have directed the Government to frame rules to prevent misuse, instead of striking down the section.

Balu quoted a case of the recent conviction of a software engineer, who indulged in Cyber Stalking before the introduction of 66A. He was convicted by the Court under Sec 67 of IT Act (punishment for publishing obscene material in the electronic form) and Sec 509 of IPC (uttering any word or making any gesture to insult the modesty of a woman). However he feels that 509 IPC which was framed in 1860 does not take into consideration the activities in cyber space. "The new situation warrants a new law", he adds.

Naavi, Founder of the online Cyber Law College and the author of the first book on Cyber Law in India also agrees that Sec 66A should not have been struck down, exposing the Indian women to greater risk. He pleads that a new section be brought to replace Sec 66A. He wants the media and the woman organisations to take up the matter with the Government.

What Victims Should Do?

Before filing a police complaint, the women, harassed through the mobile phone, Facebook, Twitter or any social medium, can first warn the culprit of dire legal consequences. In 90% of the cases, the culprits will not trouble the victim thereafter. If the culprit pursues with the harassment, the victim can file a police complaint, providing evidence of the harassment. If the Police does not respond, the victim can pursue through women social organisations. They can also approach the courts to issue directives to the Police for action.

In the case of harassments turning serious, the victims should also approach the National Human Rights Commission and National Commission for Women for redressal of their grievance.

Why Protection to Women?

Ravichandran feels that women should understand that their protection begins by taking care of themselves first. It does not make sense to talk of gender equality and then seek safety and special protection in the same breath. However Sonia, representing the current youth, feels that with the growth of technology and employment opportunity, women are not confined indoors and are exposed to the risks of encountering perverts in the society. While the Constitution provides equality to all, we as a society, must provide social justice and protection to the vulnerable sections of the society. The women community is one such vulnerable section of the society which needs to be protected by the responsible society, from miscreants. These women are the daughters and sisters of the society. Sonia feels that all elders in the family and the community should counsel the boys and sensitise them towards treating women, irrespective of their age and social background, with respect and dignity, as they hopefully, would treat their own sisters.

Though the elders may sound conservative, the hidden concern cannot be ignored. While every effort has to be made to make the law tighter, we should understand that the law in the statute books alone cannot resolve this issue. The individual and the social system should develop inherent strength to face and deal with the challenges.

By K. Srinivasan, Editor in Chief
Source: April 2016 issue of Ezine PreSense

Are Social Networking Sites A Threat to Nation's Security?



Man is a social animal and is naturally communicative. And we find this nature especially pronounced in a country like India. Indians are generally outspoken, ready to share and care. For this

reason, not surprisingly, the social networking sites have always been a big hit in India, possibly growing at a faster pace than anywhere else in the world. Along with its popularity, the social networking medium also runs a high security risk for the user, as no messaging service can be stated to be 100% safe, secure and impenetrable. A service considered secure today could prove to be vulnerable tomorrow. Technology professionals are constantly casting aspersions on the security mechanism available, and are never confident about the fool-proof security strength of any technology.

WhatsApp, in its official website says, "*confidentiality and security are laid down in our DNA*". It adds that from the very first day it helps "*you stay in touch with your friends, share vital information during a disaster, reunite divorced families....share personal moments ...we have built-in encryption*". It claims that the photos, videos, calls and documents shared over WhatsApp are protected against unauthorised access. It adds that it does not store the messages on its servers. But the flip side is that this very assurance raises the concern of governments and investigators, engaged in solving and arresting cyber-crime and combating cyber terrorism.

There are interesting debates about lack of security in social networking sites, especially WhatsApp. In fact, there is a lurking fear as to whether one can eavesdrop on WhatsApp

calls (i.e. intercepted and accessed) even though WhatsApp assures that the chats and calls are end-to-end encrypted. This assurance raises the comfort level of WhatsApp users in the sense that even if anyone tries to intercept messages using stealth technology, he would not be able to read (i.e. understand) the message. In technical parlance, it means that any chat message in WhatsApp travels in an encrypted mode, i.e. not in plain text. It can be decoded and understood only with the help of a specific decryption methodology only. The comfort one gets from this assurance is that even if anyone tries to intercept using technology, he would not be able to read (i.e. understand) the message.

On the flip side, however, this privacy of messages (which cannot be intercepted by anyone) can be a major threat to the security of a country. Often, there is criticism that security is breached as terrorists and anti-nationals exploit these private networking media to exchange security-threatening messages and instructions among themselves. Fortunately, there are software tools that can be used for mobile data recovery. These tools can also access WhatsApp data including stored text and pictures, even if they have been 'deleted'.

Of late, there have been many other messenger services emerging, to compete with WhatsApp, such as Telegram, which is gaining popularity. Telegram initially came up with the unique feature of self-deleting the message in the recipient's device too, within a few seconds after the message is sent and received at the other end. Recently, WhatsApp too added this facility of 'delete' or 'revoke' *after* the message has been sent. Although it is touted as a useful tool, it is an added nightmare for cyber-crime investigators because the evidence of messages exchanged between criminals and terrorists could then be destroyed.

And so, the debate continues on the question: "Which is supreme – the priority of the nation's security and sovereignty, OR individual data privacy"? The judiciary has repeatedly held that the nation's security is always supreme

and of paramount importance, compared to individual privacy and data security. With the Data Privacy Act being discussed for immediate introduction, one hopes that the legislative provisions will be in place, removing ambiguity in the interpretation of what individual privacy is, and what national security and sovereignty is. India, as a nation in its fast-paced progress in the digital world, anxiously awaits.

By V. Rajendran, Editor

Source : November 2017 issue of Ezine PreSense

Bitcoins – Demystified

Currency, as an enabler to trade and payments, is as old as commerce, dating back to the earliest of civilisations. Every nation has its own currency. In international trade however, the medium of settlement for payments and commerce is often through the stronger currency or as per the agreement between the parties. The world is now witnessing a new form of currency, viz. cryptocurrency. It can be loosely equated to digital currency, although it is not exactly synonymous. In the organised and regulated market, there is always a systemic representation of the digital form of currency (as opposed to physical currency). In any economy, besides the physical currency notes in circulation, substantial exchange is also done through banking transactions i.e. in digital format, which represent a major part of the nation's economy. From this perspective, cryptocurrency does not represent the quantifiable, measurable and physical figure.

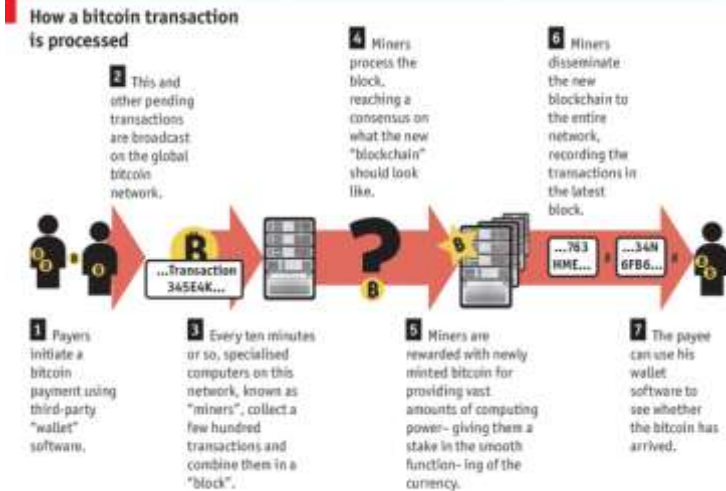
What is Bitcoin?

Bitcoin is a digital asset, and a payment system owned by nobody, regulated by none, and expressed as an open computer source software. It is accepted as a means of payment by a particular group of people. It was reportedly invented in 2009 by a Russian named Santoshi Nakamoto, whose biography is mysterious and not much is known about him (or maybe a group of men by that name, who could be the founders) for reasons better known to him/them. While introducing the concept of Bitcoin, the unknown person or people also introduced the first database for the technology called Blockchain, to enable payment through Bitcoin.

Every currency has a physical form – paper or a metal coin or both. In this cryptocurrency, it is just the computer system software i.e. the cryptographic source code that 'shows' the balance or 'evidences' the currency balance. Bitcoin is a cryptographically secure medium of financial

exchange and not a 'fraud' though it comes under 'unregulated' medium. Bitcoin is basically 'digital' without a physical form. No doubt, in these days of e-commerce and online funds remittances, lots of financial transactions are in digital format.

The Technology Behind Bitcoin



economict.com

Bitcoin functions in blockchain technology. Blockchain is a public distributed ledger verified by network nodes and authenticated through the computer source code in the app provided. It is an open source software, with no person, company or country owning this network, just as no one owns the Internet. In this system, users transact directly with the other end, without an intermediary like a bank or a credit card company or a clearing house. Since this is a computer based cryptographic technology, it has become easier in the modern day digital banking era, for banking transactions. Some private banks in India are reportedly transacting through blockchain already (although the regulator, the Reserve Bank of India, i.e. RBI, is yet to officially recognise or monitor this method of payment).

To open a Bitcoin account (or any cryptocurrency), you have to log in to their website, have a username created along

with a password, and then have the initial money transferred from your e-wallet like PayTM. Alternatively, you can give this account number from the ledger, to your clients and request them to pay to this account in this exchange itself, thereby converting your USD or INR invoice to this exchange-currency. You can later view in this ledger and trade in this exchange further, depending on that particular day's rate value, and, to be precise, the rate value at that particular time.

Bitcoin is not a monopoly. Although it was the number one cryptocurrency, other such currencies also functioning on the blockchain technology, are now catching on. Bitcoins, which once enjoyed more than 80% of the market share, has now reportedly come down to less than 40% market share. Ethereum, Ripple and Litecoin are accepted as alternative cryptocurrencies, rivalling Bitcoins.

The Regulatory Mechanism

Currently, cryptocurrency called by any name and of any origin, is not recognised in India by the financial regulator, RBI. Anyone trading in Bitcoins or other such cryptocurrencies would be doing so, completely at his own risk, playing in a field where there is no referee, no umpire, no intermediary and no rules and regulations. Even then, notwithstanding this uncertainty, the use of Bitcoins is on the rise and the volume of trade is increasing, especially among the high-stake financial players with an appetite for risk. It is said that although it is not recognised at present, the underlying technology behind cryptocurrencies will continue to exist. With a view to discourage the use of Bitcoins, the Finance Ministry has even labelled it as a worthless Ponzi Scheme.

The Global Scenario

Nations worldwide have not yet taken a clear stand on the use of cryptocurrencies. Understandably, it is feared that an unregulated and volatile system of payments and

settlements has all the potential to destabilise any economy and derail the financial progress of the nation. Some nations have banned cryptocurrencies and called them illegal, while some have recognised it, while a few countries have not specifically banned it or called it illegal but recognised the underlying technology of blockchains for transfer of funds. It is legal in countries like USA, Mexico, Canada, Brazil, Japan and Singapore, while countries like China and Russia have not recognised it as public currency.

High Value and Volatility

The currency is so volatile that its price fell from USD 19,000 on 16th December 2017 to a low of USD 12,000 on 30th December 2017. Perhaps it is this volatility that makes it interesting to many, and irresistible to those with a risk appetite. In today's international trade, Bitcoin is the one with the highest value, a rate that is unimaginable, with even Google recognising it as a currency, and displaying its value in its normal searches. Today's Bitcoin market value is around INR. 6,30,000 (i.e. USD 9,800), which was once as low as INR 4,500 during 2010. Because of the high value, every Bitcoin is divisible to the 8th decimal place, which is the smallest unit of a Bitcoin.

Security Concerns

Besides the risk aspect, even on the security aspects, cryptocurrencies do not provide any comfort factor to the users. Already, some 175 million US dollars' worth of cryptocurrencies are reported to be 'stolen' as a result of hacking into the servers of just three exchanges so far. The exact figure remains unknown. With such a huge unregulated market, unmonitored transactions and intermediary-less opaque deals, where would one report these cyber-crimes? Since the value of cryptocurrencies is soaring, hackers consider it as easy-target-more-money than the conventional and normal electronic banking sites.

The Future

There are diverse opinions about the use, and the future of Bitcoins. Some people (frankly, very few) say that it is the future currency of the globe, though serious and learned economists are quite sceptical about the use of cryptocurrencies. The well-known American business magnate and philanthropist, Warren Buffet arguably among the most successful investors of the world, has gone on record saying that cryptocurrencies have a bad ending and his firm was not interested in it. And recently, according to Forbes' latest list of billionaires, Satoshi Nakamoto, Bitcoin's mysterious inventor/s (where is he now?), is among the world's 50 richest people.

There are many corporates across the globe accepting or in the process of accepting Bitcoins as a medium of payment. In India too, as a first of its kind, some leading software giants have developed and are using the Blockchain technology, on which Bitcoins trading is done (and maybe other crypto-currencies too). Reliance Jio is now reportedly planning its own cryptocurrency to be called 'Jiocoins' and a young team of finance and software professionals is working to launch it soon. If a few more companies join the bandwagon, it would be interesting to watch what stand our regulator, RBI will take to deal with the issue. As of now, the Finance Ministry has cautioned about the risk associated with these digital currencies and warned that they may become a tool for money laundering and other clandestine payments.

Here are some incredible but interesting titbits about Bitcoins:

- Just 1% of the Bitcoin community controls 99% of the Bitcoin wealth.
- Only around 900 people worldwide, own half of all Bitcoins.

- Ethereum, a popular cryptocurrency, saw an incredible increase of 3,888% in just 5 months i.e. from USD 5,000 to USD 199,400.
- Communication among the groups is mostly encoded and not easily accessible in the Internet.

To conclude, with everything becoming digitised (moving away from physical), it would be interesting to watch the progress of such cryptocurrencies. It would perhaps be like watching a performance from the gallery. Wisdom has to prevail upon the users to stay away from such unregulated, unmonitored market.

V. Rajendran, Editor

Source: January 2018 issue of PreSense

A Genius of a Million Years, Stephen Hawking



The entire world wept when Professor Stephen William Hawking passed away on March 14th 2018 at the age of 76. He was the Director of Research at the Department of Applied Mathematics and Theoretical Physics and Founder of the Centre for Theoretical Cosmology at Cambridge, United Kingdom. It is interesting to know as to why the world should mourn the death of a scientist.

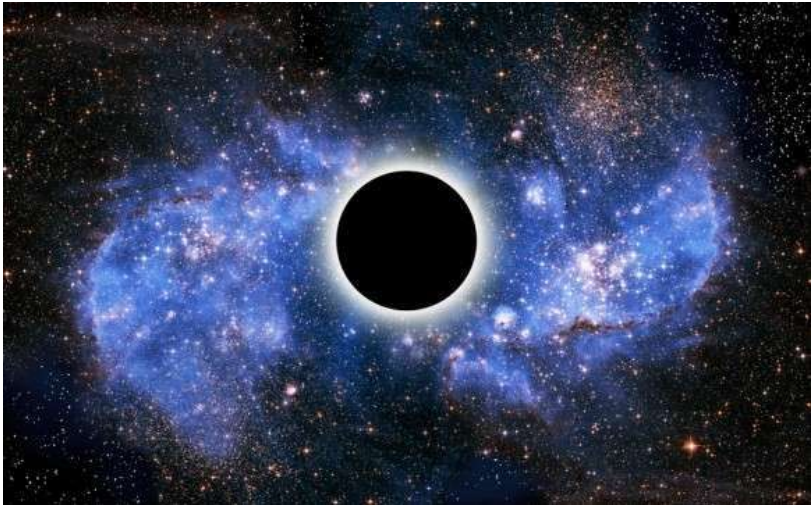
Understanding how our earth was created, how our solar system came into existence and how the universe itself was born, were questions of keen interest for mankind since the first man was born on earth about 4.2 million years ago.

Many things in the quest to understand the universe were not known until Professor Albert Einstein gave his powerful Theory of Relativity, which helped to understand the universe

better. But when Professor Stephen William Hawking used the four tools of Relativity, Gravity, Quantum Mechanics and Thermodynamics to explain with amazing intelligence, almost all the mysteries about the origin of our entire universe and to some extent its possible end are now understood beyond reasonable doubt. This is why Professor Stephen William Hawking is regarded a genius of a million years.

Hawking as a Genius Scientist

Professor Stephen Hawking worked on the basic laws which govern the universe. Hawking felt that it was necessary to unify Einstein's General Relativity Theory with Quantum Theory.



- To the surprise of the world, he went on to prove that black holes are not completely black, but that they emit radiation which we now call the 'Hawking' Radiation. By emitting such radiation, the black hole will eventually evaporate until it dies completely.
- Hawking mathematically proved that information cannot be lost inside a black hole but that in fact it is conserved.

- Hawking also proved that the universe has no direction, edge or boundary in imaginary time. This is like saying that there is no north as a dimension or direction beyond the North Pole and the Earth.

Based on the above three contributions by Hawking, the world today considers him a genius of a million years, along with Einstein.

Hawking on the Future of Humanity

i) Safety of Life on Earth

Hawking used to ask, "In a world that is in chaos politically, socially and environmentally, how can the human race sustain another 100 years?". He elaborated, "I ask this question so that people can think about it, and to be aware of the dangers we now face." Hawking expressed concern that life on Earth was at risk from a sudden nuclear war, a genetically engineered virus, global warming, or other dangers humans have not yet thought of. Such a planet-wide disaster need not result in human extinction if the human race is able to colonise additional planets before the disaster. Hawking viewed spaceflight and the colonisation of space as necessary for the future of humanity.

ii) Aliens

Hawking stated that given the vastness of the universe, aliens are likely to exist, but that contact with them should be avoided. He warned that aliens might pillage the earth for resources. He said, "If aliens visit us, the outcome would be much as when Columbus landed in America, which did not turn out well for the Native Americans."

iii) Artificial Intelligence

Hawking warned that super intelligent Artificial Intelligence (AI) could be pivotal in steering the fate of the human race, stating that "the potential benefits are huge. Success in

creating AI would be the biggest event in human history. It might also be the last unless we learn how to avoid the risks.

iv) Religion and Philosophy

He said that philosophical problems can be increasingly explained by science, particularly new scientific theories which "lead us to a new and very different picture of the universe and our place in it". He said that even if we assumed that God had decreed all the physical laws, God did not interfere to violate any of them. He was a vigorous supporter of the Many-Worlds Theory.

Personal Life of Hawking

Hawking had a very rare early onset of a slow-progressing form of motor neurone disease (also known as Amyotrophic Lateral Sclerosis, "ALS" or Lou Gehrig's Disease) that gradually led to paralysis, over the decades. Even after the loss of his speech, he was still able to communicate through a speech-generating device, initially through use of a hand-held switch, and eventually by using a single cheek muscle.

Uniqueness of Hawking

Stephen William Hawking was the distinguished Director of Research at the Centre for Theoretical Cosmology within the University of Cambridge. His books "A Brief History of Time" and "Theory of Everything" are extremely popular and more than a million copies of the former title were sold.

Hawking's dates of birth and death both hold special significance as he was born on the 300th death anniversary of Galileo and he died on 139th birth anniversary of Einstein.

Hawking's equation:

$$S = \frac{\pi A k c^3}{2 h G}$$

Key

S entropy
h the Planck constant
G Newton's constant
A area of event horizon
c speed of light
k Boltzmann's constant

Rare Honours Won by Hawking

Great Britain honoured him with its highest award, Commander of the British Empire. In a very rare gesture, former US President Barack Obama, awarded Hawking The Presidential Medal of Freedom, which is the highest civilian award of America. This Award was presented for guiding humanity in a path-breaking manner using the highest order of science and ingenuity. Hawking is also in the elite group of the 100 Greatest Britons ever lived, according to a BBC-conducted poll.

Hawking's Last Wish

Hawking had often said, "We have this one life to appreciate the grand design of the universe, and for that, I am extremely grateful." Hawking wished that the Black Hole Equation which he formulated, be written on his tomb (See *image on right*).

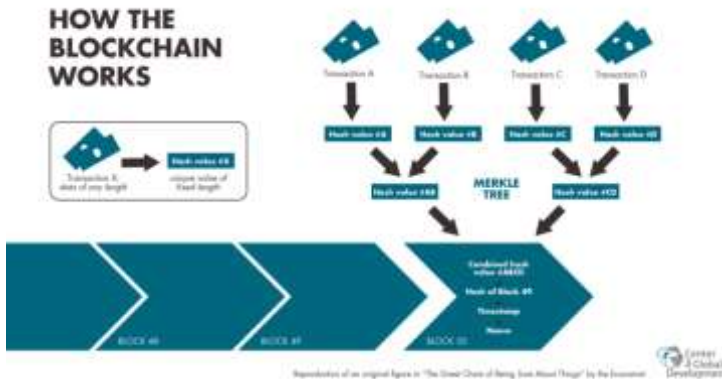
***By Prof. R. Jagannathan, Editorial Advisor
Soutce: March 2018 issue of PreSense***

Blockchain Technology

Blockchain technology is prophesied to change the world, portended to rock the banking industry and revolutionise its basic structure, just as the internet did, a few decades ago, in changing the way the world communicates. Blockchain technology is expected to change the way the world will transact business.

Blockchain technology is defined as a digitised and decentralised public ledger of all cryptocurrency transactions. For a quick re-cap on bitcoin, it is a virtual currency accepted in modes of payment and currencies of exchanges in a limited group within which it is traded, at the market determined rate, which is highly volatile. At today's prevailing rate, bitcoin is valued at around Rs.5 lakh (Rs.500,000) per coin (unit). Bitcoin is volatile, unpredictable, uncontrolled and completely unregulated as it has not yet come under any particular nation's regulatory mechanism. Some countries have not even recognised bitcoins as a currency. India too has not, so far. (Your emagazine, PreSense carried a detailed story on Bitcoin in its January 2018 issue).

Understanding Blockchain Technology



Blockchain technology is the system on which virtual currencies like bitcoins and ethereums (development platforms) actually sit. A blockchain can be compared to the Operating System (like MS Windows or Mac etc) of a computer, on which applications like Browser and Office Suite are loaded, and function. A blockchain is like a public ledger in which the participants maintain accounts in the form of virtual currency or crypto-currency called bitcoins or ethereums.

Blockchain was originally developed as an accounting method exclusively for the bitcoin currency, but in a short span of a few years, this technology has progressed greater in its development as compared to that of bitcoins, for which it was conceptualised. Blockchains have been growing at such a pace that observers say, it is going to re-write history in the global e-commerce arena. Since a blockchain is maintained in a digitised and decentralised format, it is deemed to be tamper evident, and maintained in an immutable manner. It reduces the friction among the various participants in commerce, traces the product and keeps track of it at every stage as a block. For instance, when you buy a car, many parties and lots of contractual obligations are involved in several stages, like the

manufacturer's ledger (books) with the progress recorded therein, the dealer or the wholesaler's ledgers, the financier's books (if any), the registration authorities and then the ultimate consumer's ledgers. In a blockchain, the manufacturer, as a participant, marks the models being manufactured and other details. The dealer thus gets to know the number of vehicles available, with complete details. The regulatory government authorities mark the same with details for registration and numbering purposes and the financier or the leasing company marks the same as part of the contractual obligation between the lessor and the lessee. The ultimate consumer or user has all these details by the time the vehicle is delivered to him.

From the above example, it is evident that blockchain stores the transaction data in blocks in such a way that each block is linked to the next and the entire process is completely transparent and tamperproof. Each block leads to the next and the sequence is maintained, preventing any *ad hoc* insertion or alteration. Each participant in the chain is like a node in a network, accessing through a hash algorithm in a secure manner with a user ID and password, with a copy of the blockchain downloaded automatically.

Application of Blockchain Technology

In commerce, ledgers are conventionally and typically maintained at every entity, ie. at every participant's level, whereas in a blockchain there is a common ledger through which the transaction flows across all the stake holders, enabling all the participants to view the entire process-flow. It is distinct from a database and hence can be linked to any database including banking. Blockchain can be compared to a SWIFT (Society for Worldwide Interbank Financial Telecommunication) transaction that enables trade payment among all member banks, ensuring security of

communication. It is generally a stand-alone package that should be systemically or manually integrated with the Core Banking Solution of the bank.

In a blockchain, the transaction is traced across the various members and is by itself a distinct technology and database. It is therefore, not a replacement of databases, or a messaging technology, but treated only as a supplement. In other words, blockchain may eventually replace the banking services or at least reduce its dependence to some extent, with many transactions going across through this technology as inter-party, in an e-commerce transaction, and the various contracts, various sets of bi-polar or two-party contracting parties at every stage getting replaced with a single smart contract in this block.

There are various parties to a blockchain. The user is a participant who conducts the transaction and is not directly concerned with the technology (like a customer of a bank is unmindful of the technology in the bank). The regulator has special permission to oversee the transaction and does not conduct any transaction, whereas the network operator has permissions to create, define and monitor the network (like the Database Administrator in a Core Banking Data Centre). Programmers and developers enable traditional data transfer from existing databases of legacy firms and participants to the block through an electronic data interface, data exchange and other data transfer modalities.



Blockchain technology is believed to be an efficient tool especially in the area of supply chains, allowing new companies even in a private blockchain and thus leveraging start-ups too. Larger companies can do business with smaller firms with reduced costs in market identification, legalities of contacts, supply chain management etc. Not just in supply chain, blockchain is expected to have a greater impact on financial services, government, manufacturing services as well especially towards effective and efficient use of intermediaries.

Status of Blockchain Technology in India

In India, a couple of months ago, in an interbank interactive survey, it transpired that 13% of the banks were already in production implementation of blockchain technology, while 30% were in the Proof of Concept stage with blockchain provider firms; 44% in the stage of formulating a strategy and evaluation, and the remaining 13% were 'looking into the technology'. This is perhaps an indicator that the blockchain technology has come to stay in India. BankChain

is reported be India's first Blockchain exploration consortium announced by the public sector giant, State Bank of India in February 2017, launched with more than 30 banks and NBFCs, National Payment Corporation of India, several foreign and private sector banks and a few public sector banks as members, in partnership with Microsoft, IBM, Data Security Council of India for expertise in their respective areas.

by V.Rajendran, Editor

Source: May 2018 issue of PreSense

Data Privacy Act – How it Will Impact Internet users?

Last week, the European Union (EU) came out with its General Data Protection Regulations popularly known as GDPR, implementing it with effect from 25 May 2018 in all the EU nations. This implementation will have a huge impact on all the nations, industries and of entities having trade and other obligations with Great Britain and other EU nations. On the first day of implementation of GDPR itself, it was reported that Facebook and Google had to face lawsuits costing millions of dollars for alleged data breaches and violations of data privacy.

What is GDPR?

GDPR is a regulation that gives control to citizens and residents over their personal data, with clear stipulations on the processing of personally identifiable information of data. It ensures that data is not available publicly without explicit consent, and it is stored and handled with utmost privacy settings within accepted lawful methodologies. GDPR is now implemented after a transition period of more than two years since its adoption in April 2016. These regulations mainly apply to any information relating to an individual, in private, professional or public life and can include such information as a name, a home address, a photo, an email address, bank details, posts on social networking sites, or medical information. For this reason, the implementation of GDPR is a significant landmark.

With the passing of CISA (Cyber Security Information Sharing Act) in USA effective from Dec 2015 and similar legislations in many other nations including GDPR in the EU, it is now time for India to come out with her own Data Privacy regulations. Perhaps as a first step and in the right direction too, the Government is setting up a committee to go into the issue of regulating the social networking sites including the right to express freely, e-publish news and fake

news and other forms of views, opinions and what is camouflaged as 'news'.

Monitoring of Social Media

It is also reported that the government might put in place a huge data analytical software tool to monitor the data that is freely exchanged in social networking sites. Although the government informed that it proposed to deploy such software tools, one is not sure if these tools are already deployed by any firm or corporate or even individuals for profiling, spying, analysing, or even investigating for crimes, including pre-recruitment checks by corporate Human Resources officials, familial verifications for matrimonial alliances etc. When a Data Privacy Act comes into effect, perhaps the government will get an official status to monitor such deployment or usage of such tools for monitoring and regulating data, even in the Internet. The government should anyway, have some control on the way data and information is currently freely handled and transmitted across the net, especially from a national security perspective. Many judicial decisions have underlined the fact that freedom of expression is not an unfettered one and that there can be reasonable restrictions on the same.

The Data Privacy Act is a landmark decision waiting to happen, especially in the background of increasingly notorious acts of fake and mischievously instigating news, and malice to people based on stolen information from private social platforms and the social media.

By V.Rajendran, Editor
Source: May 2018 issue of PreSense

Wearable Devices

Of late, the mobile handset, ubiquitous and more popular than the plain cell phone because of its additional features, has become essential for almost every person. Except where its use is restricted for security or courtesy reasons, the mobile handset is carried by every person and often extravagantly and extraneously flaunted as a status symbol, depending on the model, unique features and the cost of the handset.

These devices started off with the humble 'pager', which was the first *avatar* of the messaging service. Then came the cordless phone, as an extension to the landline phone, before the advent of the omnipresent device called the cell phone. Technologists argue that within the next few years, cell phones will give way to wearable devices with a technology that can be worn on the human body. It would be small, almost the size of a wristwatch or even a ring. Companies competing with one another, are coming out with innovations that feature devices with higher capabilities in miniscule sizes. At seminars and conferences, we get to know of such evolving technology and models from big brands like Apple iWatch and Google Glass and even smaller companies too.



The

technology used in this type of devices includes Bluetooth, Wi-Fi, sensor and transmission techniques, to enable such capabilities as reading the pulse, the blood pressure and other features of a human body. One of the common uses of a wearable device would be tracking a user's vital signs or data related to health, fitness or even emotions exhibited by the person's physical features. Depending on the technology and features of the device, the cost could vary from low-end to high-end.

Some believe that these devices could replace the cell phone and the credit/debit cards. The wearer of this gadget, using

the Bluetooth technology, would be able to attend to phone calls, gain access to rooms and halls, use it as a credit/debit card to pay and if the high cost raises the blood pressure, the blood pressure reading can be checked immediately too! Then, of course, orders for suitable medicines could be placed through an online purchase, or a cab could be booked through the device to leave the place for home or the hospital! If the health parameters show alarm, messages could be sent to the next of kin, or medical advice could be sought immediately, using this device.

On the flip side however, we know that the moment we started using a cell phone and other devices using GPS and Wi-Fi or any other form of connectivity, we lost much of our privacy. And now with these progressive devices, we are bound to lose more of our privacy like compromising even on our confidential information like critical health records and health parameters.

But then, that is what technology is all about – risking the threats of disruption and invasion as it becomes an essential and indispensable part of our lives.

by V.Rajendran, Editor
Source : Sep 2018 issue of PreSense

Our Very Own and Wonderful Sun



Whenever I look at the stars in the night sky or the Sun in the day sky, I realise how lucky we are to live on this planet and how insignificant we are in the realms of our solar system. When I walk on the street or see a tree, a pond, a river or a mountain, I realise the wonder and preciousness of our Earth, and how our Sun enabled all these wonders to exist. It is therefore no surprise why the Sun adorns a prominent place in the spiritual, religious, cultural and daily lives of all of us. Let us therefore get to know our life-giver and supporter, our very own Sun, better.

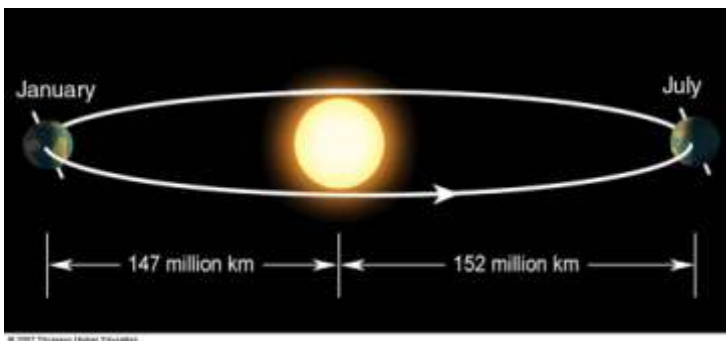
Birth of the Sun

Isolated hydrogen atoms in the free space of the galaxy, separated by distances of a few million kilometres (km), attract each other and over a prolonged period of time, start to form a lump. This lump attracts more hydrogen atoms from the space and grows bigger. This process continues over a few hundred million years until the mass of the lump becomes incredibly big. The lump then starts shrinking

inward in what is called a gravitational collapse. In this gravitational collapse which is a compression, heat is generated, leading to expansion. At one point, the shrinking due to gravitational collapse and the expansion due to the heat of compression, will balance each other. Now, we say a star of main sequence is born. This is how our Sun was born.

Interesting Facts about the Sun

When our Sun was born like this 4.6 billion years ago, a violent nuclear fusion reaction started at its core. It is energising our Sun even today. Our Sun has about 99.8 % of the mass of our solar system. If your weight is 100 kg on Earth, you will weigh 2800 kg on the surface of our Sun! The diameter of the Sun is such that we can place about 1 million Earths inside it! Its core temperature is about 16 million °C and its surface temperature is about 5500 °C. Since it is an unsafeguarded nuclear reactor, all radioactive elements from helium to iron, are thrown out of the Sun, in all directions, on a 24x7x365 basis. We call these emissions solar winds and solar flares. The solar wind is a stream of energised, charged particles, primarily electrons and protons, flowing outward from the Sun, through the solar system at speeds as high as 900 km/s and at a temperature of about 1 million °C.



In addition to this, there are Coronal Mass Ejections (CME) in which the Sun, on an average, throws out fine radioactive

particles of about 5 million kilogrammes every second with an average speed of 489 km/s.

So, the beautiful Sun that we see every day, is really a dangerously and violent nuclear reactor of diameter about 1.5 million km. Light takes about 8 minutes to travel from the Sun to Earth. It is interesting that the same light would have taken about a million years to travel from the core to the surface of the Sun. How strange is this Sun?

How Old is Our Sun and How Will it Die?

Our Sun is now a middle-aged star. It has enough hydrogen to sustain the nuclear fusion for another 5 billion years approximately. When its hydrogen content at the core is insufficient for the nuclear synthesis of helium, its effective life is over. It will then start expanding. The expansion will go even beyond Pluto, engulfing all the planets, including our mother Earth. All life forms on Earth would be extinguished well before the expansion itself. When the sun expands like this, it will look red and huge and hence, it will be called a "red giant". When it becomes a red giant, at one point, it will shake itself violently shedding much of its own mass and in the process, it will become a very small white dwarf.

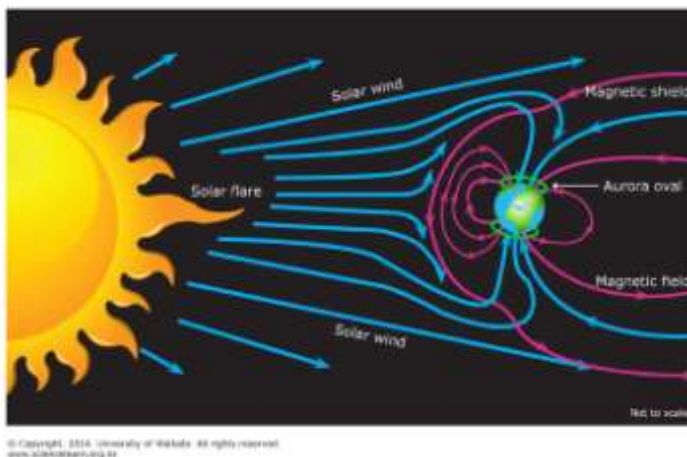
How Safe are We on Earth, from the Sun?

Earth's closest distance to the Sun is 147 million km and its farthest distance from the Sun is 152 million km. Had Earth been at a distance 10% closer than the present closest distance, then the noon temperature on Earth would be around 400 °C and life would not have been possible on Earth. On the other hand, had Earth been at a distance 10% farther away from the present farthest distance, then Earth's night temperature would have been around -200 °C and again, life would not have been possible on Earth.

The ionised particles thrown out by the Sun in the direction of Earth being in millions, all life forms on Earth would have been wiped out several million years ago itself. But life on Earth has survived due to the magnetic field of Earth. All the ionising particles coming from the Sun and the cosmos are deflected by Earth's magnetic field to land near the poles making other areas of Earth safe for life. This is evident from the picture released by the University of Waikato.

Conclusion

Our Earth is going around our central star – the Sun, which is a very violent un-safeguarded nuclear reactor. Fortunately, Earth's magnetic field saves us from the Sun's ionising radiations. Similarly, the distance of Earth from the Sun is so framed up in nature that life can sustain itself on Earth. When nature has very delicately permitted and sustained life on this planet, must we pollute and degrade it? We must strive to live in peace, ignoring our differences of opinions, so that all of all us can appreciate the concept of life in this solar system and enjoy the life that we are blessed with.



**by
Prof.**

***R.Jagannathan, Editorial Advisor
Source : Oct 2018 issue of PreSense***

Energy from Toilet Waste – Bringing Power to India

A recent news report confirmed that the Indian Rupee recovered sharply against the US Dollar, following a crash in the international crude oil prices. This respite is attributed to the 6-month waiver granted by USA to India on Iran sanctions. One must wait and watch the situation after the 6-month waiver expires and India must cease all imports from Iran, to adhere to USA's diktat. India has been one of the largest importers of oil from Iran. Such is the extent of India's dependence on imported oil for its domestic energy consumption needs.

Energy is an essential commodity in our lives for use in domestic and public lighting, running of essential machinery, transportation, travelling, in agriculture, manufacturing and service industries. Currently, India is dependent on imported oil to meet its energy requirements and the volatility of fuel prices, and unstable political and economic situations around the world, is not making it easy for India to ensure stable and affordable power resources. In this backdrop of bleakness and uncertainty, it is imperative that India looks to alternative means and strategies to ensure it does not plunge into darkness and to a grinding economic halt for want of sufficient power for its people.

India's focus for the power sector should be three-fold:

- Energy security – providing affordable, accessible energy to meet the growing demand.
- Energy independence - reducing the dependence on foreign resources or fossil fuel, and generating our own renewable resources to meet the growing needs. Fossil fuel is from coal, petroleum, diesel and natural gas.
- Reduction of carbon emission by cutting down on fossil fuel consumption and generating green power. This is possible by migrating to renewable energy resources, viz solar, wind, nuclear, biogas and hydrogen.

Current Power Situation in India

India is dependent on fossil fuel today for 75% of its total energy consumption. It is feared that the supply of fossil fuel would be depleted in another 20-30 years' time. The situation of fossil fuel dependency is somewhat similar the world over but every country has its own energy resource mix policy. For example, developed and cash-rich countries with advanced economies preserve their available indigenous energy resources for future, and are able to afford to buy energy resources from abroad for their present requirement.

For India, the way forward to resolve this energy crisis is to develop an effective technology to tap renewable energy resources. Today, only 5% of the country's energy consumption is from renewable energy resources.

Currently, India's energy consumption totalling 343,000MW (megawatt) (200,000MW in 2005, and projected to reach 450,000MW by 2030) is met from:

- fossil (coal, gas, diesel) – 220,000MW (energy efficiency of 60-75%)
- solar, biofuel, wind – 69,000MW (energy efficiency 35%)
- hydro – 45,000MW (energy efficiency 40%)
- nuclear – 7,000MW (energy efficiency 95%)

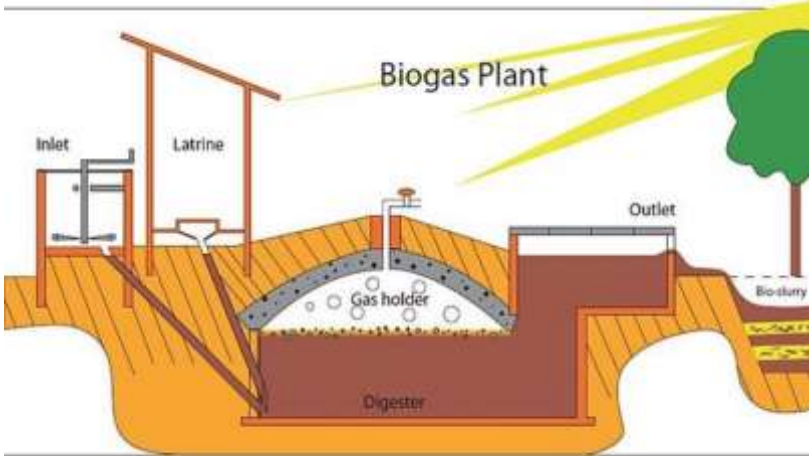
(Energy efficiency is the percentage of actual utilisation of energy from the supply available, excluding waste such as distribution leaks and pilferages.)

Interestingly, 1,000 MW of the total nuclear energy resource is from Tamil Nadu (Kudankulam and Kalpakkam projects).

The country sources renewable energy from wind (32,000 MW, of which 8,000 MW is from Tamil Nadu, especially Kanyakumari District, which supplies 5,000MW), solar (10,000 MW), biomass (8,000 MW), small hydro projects (4,500 MW) and municipal waste (1,000 MW). While

Energy Generation from Toilet

The ideal renewable energy source to be tapped, especially at the grass root level of villages, to bring India to an energy-sufficient level is municipal waste. Municipal waste is



toilet waste. If toilet waste is collected through a centralised drainage system in every village or locality, this can be a valuable, sustainable and economical source of energy to light up every house and meet much of the local energy requirements. Toilets in villages, including those constructed under the *Swachh Bharat Abhiyan* (Clean India Mission) are currently constructed as individual pits. These pits can also pose a health threat by contaminating groundwater and its TDS (total dissolved solids). If these pits are connected to a centralised biodigester plant and the waste treated, it would provide a source of energy and revenue for the villages.

The *panchayat* of an average village, with a population of 2500, has the capacity to generate 50-100 kW (kilowatt) from a municipal waste power generation project. Similarly, an urban municipality can generate 1MW, and an urban corporation can generate 5-10MW. Tamil Nadu State for example, has 153 municipalities and 14 corporations. The

investment for generation of 1MW energy from municipal waste is estimated at Rs.20-30 million.

Thirty-one educational institutions and industrial entities in Tamil Nadu have successfully implemented the municipal waste energy project which generates around 1392 kW in total. Two of the initial projects implemented are in Tamil Nadu – one at Sastra University which generates 72kW, and the other at Periyar PURA at Periyar Maniammai University which generates 60kW power. These projects in Tamil Nadu were inaugurated by late Dr A.P.J Abdul Kalam (11th President of India) in 2009. With the implementation of this project, the universities are able to meet their captive energy requirements from the energy generated through the project. Two industrial entities in Tamil Nadu are generating 200kW each.

Unfortunately, the concept has not yet been successfully implemented at the village level because of the lack of coordination among the people required to be involved, viz. the Government (both State and Central), institutions, village *panchayats*, research departments and corporates. The participation of corporates through their CSR (Corporate Social Responsibility) plans is critical here. The cost of the project is estimated at Rs.25 million which includes installation of centralisation drainage of toilets – Rs.10 million, central bio-digester plant – Rs.5 million, accessories – Rs.10 million.

Economics of Municipal Waste Energy Project

The process involved in the municipal waste energy project is as follows:

- When a village having 1,000 houses with toilets implements the project, 100 kWh energy can be generated per hour per village.
- At an average of 12 hours of generation per day, it generates 1200 kWh energy per day.

- By installing solar beams for solar energy generation, the captive energy requirement and public lighting can be met so that the municipal waste energy generated is available for sale to the Government grid @ Rs.3.47/- per KWh. The total revenue for the village per day will thus be Rs. 4164 and Rs. 124,920 per month or Rs. 1.5 million per annum.
- The RoI (Return on Investment) is achieved in 5 years' time, and there will be surplus revenue generated thence, available to the village *panchayat* for spending on the village, instead of depending on government disbursed funds.
- There could be public-private participation of say, 25% by the village *panchayat* and 75% by social enterprises like the Government (subsidy), banks (loans) and corporates (grants through CSR).
- An alternative is for each corporate to adopt at least one village, investing a maximum of Rs.20-25 million, so that the 200,000 village *panchayats* can be adopted by corporates under their CSR commitment.
- This project will also provide employment to the youth of the village at the rate of at least five youngsters per project, as they will run and maintain the project and ancillary enterprises.

A critical pre-requisite for this project is segregation. Rainwater harvesting facility should be installed to direct rainwater to the local ponds and lakes. Rainwater harvesting in individual homes will take the rainwater to self-owned sumps and water tanks. Bathroom/kitchen waste must be segregated from toilet waste before treating them separately. Bathroom waste can be used for outdoor water requirements and toilet waste can be used for energy generation.

Unfortunately, there has been little coordination among the governments, institutions and corporates. In spite of successful technological researches accomplished by the Government research departments, these lie underutilised and not implemented. As Shri V. Ponraj, former Scientific Advisor to late Dr Kalam reflected with regret, "India has

islands/beads of success, but no one is making a garland out of these successful researches.” Shri Ponraj had been associated with Dr Kalam in evolving the Energy Independences Vision 2030, propagating and promoting the concept of generating sustainable energy from renewable resources at affordable cost. He sees immense scope in this project, as according to him, India has 200 million houses, out of which 40 million houses remain without electricity.

In 2014, Dr Kalam had proposed the municipal waste energy generation concept while presenting the PURA (Provision of Urban Amenities to Rural Areas) Scheme, conceptualised by him for providing economic opportunities outside of cities. He had also detailed it in his book, 'A Manifesto for Change'.

Interestingly, Shri Ponraj had also recommended adoption of the Municipal Waste Energy Project in the Shyama Prakash Mukherjee RURBAN Mission (SPMRM) of the Government of India, launched in February 2016. SPMRM envisages development of rural growth clusters in all the states and Union Territories of the country to trigger overall development, by providing economic activities, development of skills and local entrepreneurship and infrastructural amenities. So far, there is little positive response to this recommendation.

Initiating Small Steps Towards Rural Development

In 2017, Ponraj with his team of people, adopted 24 villages in the district of Cuddalore in Tamil Nadu and initiated Dr Kalam's PURA scheme, with the support of the Cuddalore District Administration and funding by the Tamil Sangam, USA. The mission is threefold:

1) providing safe drinking water, 2) segregating the drainage system, and 3) connecting the toilets for implementing the municipal waste energy generation. The scheme has completed the first phase of the mission and 40,000 litres of RO-treated drinking water is generated from the local sources for the villagers. 'ATMs' have been installed in the villages to provide drinking water @ Rs.3 per litre.

The successful implementation of the Municipal Waste Power Generation Project will help in creating a clean, green and carbon-neutral India. We all could then dream of a country that is truly and rightfully an "Incredible India".

***by Susan Koshy, Editor-in-Chief,
with input from Shri V. Ponraj,
Former Scientific Advisor
to late Dr A.P.J. Abdul Kalam
Source : Nov 2018 issue of PreSense***

When It's December, We Greet New Nobel Laureates!

On December 10th every year, the Nobel Prize winners for the year are awarded the most coveted prize on earth – the Nobel Medal and the Diploma – by the King of Sweden. This year, King Carl XVI Gustaf of Sweden will present the Nobel prizes to those who are being recognised for contributing to the greatest benefit of humankind in Physics, Chemistry, Physiology or Medicine, Literature and Peace.

The Nobel Prize was instituted by the last will and testament of the inventor of dynamite, Alfred Bernhard Nobel. The Nobel Awards and Prizes have been awarded since 1901. In his will dated November 27, 1895, Alfred Nobel had stated, "It is my express wish that when awarding the prizes, no consideration be given to nationality, but that the prize be awarded to the worthiest person." The Nobel prize winners are selected by an extraordinarily neutral and impartial process. No information of the selection process can be revealed for a 50-year period. Let us see the discoveries made by the scientists who will receive the award this year.

Nobel Awards and Prize for 2018

Nobel Award for Physics: **Arthur Ashkin** invented optical tweezers that can grab particles, atoms, viruses and other living cells with their laser beam fingers. A major breakthrough came in 1987 when Ashkin used the tweezers to capture living bacteria without harming them. He was able to study the biological systems. Optical tweezers are now widely used to investigate the machinery of life.

Gérard Mourou and **Donna Strickland** paved the way to the creation of the shortest and most intense laser pulses. Their revolutionary article was published in 1985 and it was the foundation of Strickland's doctoral thesis. Using an ingenious approach, they



succeeded in creating ultrashort high-intensity laser pulses. Its uses include millions of corrective eye surgeries (see *adjoining picture*) that are conducted every year using the sharpest of laser beams.

The innumerable areas of application of the discoveries of these scientists have not yet been completely explored. However, even now, these inventions allow us to rummage around in the microworld in the spirit of Alfred Nobel's will – for the greatest benefit of humankind. These three great scientists are awarded the 2018 Nobel Prize for Physics.

Nobel Award for Chemistry: This year's Nobel Laureates in Chemistry were inspired by the power of evolution and used the same principles – genetic change and selection – to develop proteins that solve mankind's chemical problems.

In 1993, Frances H. Arnold conducted the first directed evolution of enzymes, which are proteins. The enzymes developed by Frances Arnold are used in the manufacture of chemical substances that are more environmentally friendly, such as pharmaceuticals, and in the production of renewable fuels for a greener transport sector. In 1985, **George P. Smith** developed an elegant method known as phage display, where a bacteriophage – a virus that infects bacteria – can be used to evolve new proteins. Sir Gregory Winter used phage display for the directed evolution of antibodies, with the aim of producing new pharmaceuticals. The first pharmaceutical based on this method called adalimumab, was approved in 2002 and is used for rheumatoid arthritis, psoriasis and inflammatory bowel diseases. Since then, phage display has produced anti-bodies that can neutralise toxins, counteract auto-immune diseases and cure metastatic cancer.

Physiology/Medicine Nobel
Prize: Cancer kills millions of
people every year and it is one
of humanity's greatest health
challenges. By stimulating the
inherent ability of our immune system to attack the tumour



cells, this year's Nobel Laureates have established an entirely new principle for cancer therapy.

James P. Allison studied a known protein that functions as a brake on the immune system. He realised the potential of releasing the brake and thereby unleashing our immune cells to attack the tumours. He then developed this concept into a new approach for treating patients for cancer.

Tasuku Honjo discovered a protein on immune cells and, after careful exploration of its function, eventually revealed that it also operates as a brake, but with a different mechanism of action. Therapies based on his discovery proved to be strikingly effective in the fight against cancer.

Allison and Honjo showed how different strategies for inhibiting the brakes on the immune system can be used in the treatment of cancer. The seminal discoveries by the two Laureates constitute a landmark in our fight against cancer.

Nobel Prize for Peace: This year's Nobel Peace Prize is firmly embedded in the criteria spelled out in Alfred Nobel's will. Denis Mukwege and Nadia Murad have both put their personal security at risk by courageously combating war crimes and seeking justice for the victims. They have thereby promoted the fraternity of nations through the application of principles of international law.

Nobel Prize for Literature: For the first time since 1949, the Secretive Jury that hands out the world's most prestigious Literary Nobel Prize, has announced that there will be no recipient for the Nobel Prize for Literature this year, but it will be given to two people in 2019.

Epilogue: This year 12 new laureates have been recognised for the Nobel Awards and Prizes for achievements that have contributed to the greatest benefit to humankind. Their work and discoveries range from cancer therapy and laser physics to developing proteins that can solve humankind's chemical problems. The work of the 2018 Nobel Laureates also include

combating war crimes, as well as integrating innovation with economic growth.

India is a country with the youth forming a majority of its population. It is the dream of every Indian to see a young Indian win the most coveted Nobel prize in the coming years.

by Dr R. Jagannathan, Editorial Advisor
Source : Nov 2018 issue of PreSense

Digital Signature – Demystified

Why do we sign a document? We do so to authenticate the contents of the document, so that people can rely on it as genuine. When you receive a letter from your friend, you know his handwriting, and you rely on it as authentic and irrefutable. Instead of a hand-written letter, if he types it out, or prints it out, he signs at the end of the letter to convey that he takes responsibility for the contents, thus adding authenticity to it. If you have a friend by the name 'Ram' and you receive an email from him, how do you know that the sender is your friend Ram? Anyone can create an email in any name. Suppose a fraudster creates an email in the name of 'ram' and adds a photo of your friend Ram at the bottom of the email to make you believe that the sender is indeed your friend Ram, then in such a case of electronic communication, how does one add authenticity?

The Three Pillars

In professional parlance, Confidentiality, Integrity, and Availability are stated to be the three pillars of data security. Some professionals add a fourth pillar to these with features like Non-repudiation, Authorisation, Accountability, Authentication etc. Integrity is the quality to convey that the document cannot be tampered with. Non-repudiation is the quality of non-denial *ie.* the sender should not be permitted to deny having sent it, nor the receiver be permitted to deny having received it. In a digital communication, the above attributes of security are fulfilled by a process called 'Digital Signature'. Yes, it is a process.

What is a Digital Signature?

Digital Signature is not a signature at all. A human signature is not affixed. To put it simply, a digital signature does not contain our 'signature' in the common sense of the term and we do not 'sign' in it. A Digital Signature is a mathematical technique used to authenticate an electronic message or a

digital document. It is the electronic or digital equivalent of a handwritten signature, a stamp or a seal, offering security, and safeguarding the communication or message from tampering and impersonation.

In the case of a digitally signed document, a trigger such as an SMS alert, pops up a message stating that there is a message for you. When it is clicked, it will ask for your user name and password. This process of opening the mail or communication (like NEFT or RTGS etc) is called digitally signing the document with a private key. One needs to use the designated computer system to open the document. In the absence of that particular computer system or chip card, anyone just using the registered login and password cannot open the digitally secured document. This is because that computer might not have the specific software which acts as the public key. The login and password form the private key. Both the public and private keys have to be used in combination to create an alphanumeric value called the hash value. This process is also called verification of signature by the Digital Signature Certifying Authority. A digitally signed document is different from a digitally secured or a password-protected document which asks only for the password to open it. Anyone who enters the password from any computer, can open the document.

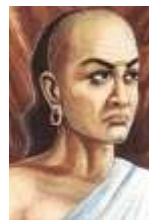
The Digital Signature Certificate (DSC) is issued by one of the nine authorised DSC entities (like National Informatics Centre, IDRBT, eMudra, TCS, etc) in the form of a chip-card or a pen drive, containing basic details. When it is inserted in our computer system containing the basic software, then whenever we send an electronic document, and we type our user name and password (which is called the private key), this, together with the basic software in the device, generates a value, *ie.* our signature is certified by the authority in a process called the public-key and private-key infrastructure. The document travels in an encrypted manner from the sender to the receiver in such a way that anyone intervening, will NOT be able to read or understand. At the other end, the email receiver also applies his user name and password which, when authenticated, will open the mail.

Thus, the confidentiality, integrity and non-repudiation are fulfilled.

What is Encryption?

Since the data (or message or email) travels in a public medium/public communication network, it should go in an encrypted manner. Encryption is the process of converting the message into such a format that no one, other than the sender and the authorised receiver, should be permitted to 'open' it to read and understand it.

Interestingly, the process of encryption of a message sent in a public medium was used in many ancient Indian epics like *Mahabharata*. Kautilya (Chanakya) in his much-acclaimed administrative treatise, "*Arthashastra*" said that any confidential message sent through a public messenger from one minister or ruler to another minister or ruler should always be encrypted.



Symmetric encryption is the process of encrypting and decrypting in the same manner. For example, if we want to convey the word 'ezine' it is encrypted as 'dyhmd'. This is simple encryption where every letter in the word 'ezine' is substituted by its preceding letter to make it incomprehensible. Digital Signature does NOT use this method of symmetric encryption. It uses asymmetric encryption, where the encryption and decryption follow different methodologies and only after deploying the software tool available with the receiver and the sender, can the message be encrypted or decrypted.

Bank Remittances

All the banks (the officials engaged in financial remittances like RTGS and NEFT among banks) in India use Digital Signature Certificates, issued by the Institute for Development and Research in Banking Technology (IDRBT), Hyderabad, which is the research wing of the Reserve Bank

India (RBI). These are therefore always safe, secure and never intercepted or tampered with. Chartered Accountants and other professionals dealing with government taxation related documents use Digital Signatures for submission of documents to the government departments like Income Tax, Sales Tax etc.

Digital Signature certifying processes and its meaning, definition and application were originally dealt with in detail in the Information Technology Act 2000. Since that Act recognised only the method of private key and public key infrastructure as discussed above, the words 'Digital Signature' was later replaced with 'Electronic Signature' in the IT Amendment Act 2008, to make it technology-neutral. Any mechanism of biometric authentication and any other technology that fulfils the attributes of information security and its related qualities like asymmetric encryption *etc*, are now recognised as legal in India.

by V.Rajendran, Editor
Source : Dec 2018 issue of PreSense

TikTok – the New Hype in Multimedia Apps

What is TikTok? TikTok is a media app for creating and sharing short videos. It is gaining ever-increasing popularity especially in the Indian market. According to Wikipedia, it is owned by ByteDance, which is a Chinese internet technology company, and it was launched as Douyin in China in September 2016. ByteDance took just 200 days to develop this app. A year later, it was introduced in the overseas market as TikTok, and it got around 100 million users within a year. It is now stated to be available in over 150 nations in 75 languages. It is also said to have surpassed Facebook, YouTube and Instagram in subscriptions, and have become the world's most downloaded app in the iOS.



How to Use?

The TikTok app is downloadable from Play Store to the phone's operating system such as Android or Apple iOS. After its installation, one can login, using the Facebook or Google user ID, or by creating a new and independent user ID. Thereafter, one gains access to a list of popular videos, to which one can upload one's voiceover, or voice to sync with the video, or even add one's own video to give the effect that they are part of the original video. TikTok must be appreciated as part of innovative technology. Facebook is reportedly working on a similar app as TikTok, with comparable features, and standalone music and video sync capabilities like karaoke.

What is the Flip Side?

Technology users, especially the mobile app users, are flooded with memes. The WhatsApp is bombarded with memes – especially of celebrities, some of them in harmless tease, some in light humour and some others bordering on defamation, mud-slinging and character assassination of the celebrity. The police and the courts have to deliberate and discuss to determine whether the meme is a penal offence of character assassination or defamation, or just a harmless joke enjoyed as 'freedom of expression in a public domain'.

The memes that are created and posted are rated as successful or popular on the basis of the number of times they are re-tweeted, forwarded or shared, and the extent to which they have spread as viral in the internet. In the process, the celebrity or person whose picture or video is the subject of the meme, becomes popular or notorious, depending on the flavour of the meme. Some of the celebrities take them as offensive and resort to legal recourse, while many ignore them.

What is the Solution?

Faced with the serious threat that this app poses through its misuse, the Government of Tamil Nadu has decided to approach the Centre Government, seeking the ban of this app from the public domain. But would this move be the ultimate solution? While the right of the government seeking a ban on any app, or for that matter, any internet web page or website or contents, is legible and legal, and we do appreciate its judicious use of such right with due restraint, we have to look at the practical implications of such an action. Blocking and banning may be an immediate remedy, but would it pay in the long run? We are all aware that if a building site is demolished because it is an illegal construction erected in gross violation of local administrative guidelines, it takes at least a few months if not years for someone who, out of audacity, would want to construct a similar site in the same place. But in the case of a website, it takes barely a few minutes, not months or weeks, to set up

an app with a slight modification in the name, but with similar objectionable contents and intention.

What then is the solution? It is not the severity of laws that serves as a deterrent to crime, but the certainty of punishment. Governments have to work and act consistently and tirelessly, leaving no stones unturned, in its pursuit to regulate the internet and book offenders. The internet is aptly called an 'uncontrolled beast'. Any attempt to control such beasts, floating in the virtual world as apps and malware, should be welcome by netizens and not be criticised as curtailment of the freedom of expression. After all, what is entertaining to one, could be offensive to another. Ultimately, it is the adherence to the fundamental rules of netiquette, and cooperation with the law, that could help curtail the misuse of TikTok and its memes.

by V.Rajendran, Editor
Source : Feb 2019 issue of PreSense

Digital Disputes

From **e-commerce**, **email**, **e-banking** and **e-payments** to **e-everything**, the buzz-word today is to prefix a word with “**e-**” and make it digital! The entire world is going digital. Naturally, we have to gear up for digital disputes too. If we buy goods physically from a shop in a nearby mall, we go there to discuss the issue and sometimes return the same or take remedial steps. If we buy goods online and the goods prove defective, what happens? Do we incur the expenses of re-packing and mailing it back, and then claim refund? In such a case, if the return or any other terms of the contract is disputed, where do we go? Even assuming we are not importing it and are buying it locally, under whose jurisdiction does the transaction fall? Interesting questions.....often debated and decided by courts too, based on the nature of transactions, type of goods, the legal remedy arising out of contravention and the Act under which the action is governed.

The strength and popularity of e-commerce lies in the statement that the biggest cab operator does not own a single taxi, the biggest caterer does not produce a single food item, the biggest real estate agent does not own a single building and so on. So perhaps, the biggest retailer does not stock a single provision or grocery item. All these are just technologically strong middlemen. Hence the disputes arising from these transactions too, are more technological or techno-legal to be precise, and less physical. Although the Information Technology Act 2000 recognises electronic records as valid evidences – a position which has almost stabilised for nearly two decades now – the legal status of e-commerce, especially for the small-time consumer, continues to be often debated. This consumer is often unsure about his options and whom he could approach in case of a dispute.

Basically, it is the terms of contract of sale that govern the transaction and naturally, the terms have to be read thoroughly. In practice however, especially when the terms of a contract or agreement run into pages, at the end of

which is an “I Agree” button, we simply scroll down to the final page and click that button to proceed/continue. How many of us do actually read the entire document, and understand it?

A simple legal redress is that a contract is materialised when an offer is accepted by acceptance, and at the place where accepted. Hence to put it in simple words, an e-commerce transaction is completed as a contract and in case of a dispute, the buyer's place will have jurisdiction. This simple issue of a sale transaction can get complicated if the seller is abroad or the buyer's place itself is ambiguous *ie* a person residing abroad, ensuring delivery in an Indian city and making payment from a foreign bank and foreign branch.

“*Caveat Emptor*” is a Latin phrase and an old adage to mean “*Let the buyer beware*”. In other words, the buyer is to be cautious about the nature of the goods bought *ie* on an ‘*as is where is*’ condition or something to that effect. Perhaps, in an e-commerce, it should be “buyer **e**-beware” *ie* the buyer should **e**lectronically or even **e**xcessively beware of the terms of the trade.

by V.Rajendran, Editor

Source : March 2019 issue of PreSense

Black Hole – Finally Captured by Mankind!

Introduction

It is a moment of pride for all of us living on Planet Earth, as we advance in our understanding about black holes, to capture one of them in a photograph!

The name 'black hole' is a misnomer in the sense that it is not a hole in the sky but is a massive star, which captures/absorbs even light so that it looks like a black hole in the sky.



The black hole in the M87 Galaxy, which is about 55 million light years away, has been successfully photographed by mankind for the first time in history, after 20 years of persistent and intense efforts by international scientists. *(A light year is a unit of distance, used for measuring the astronomical distances in outer space. A light year is the distance travelled by light in one year. Light travels at a velocity of about 300,000 kilometre per second. It travels nearly 10 trillion kilometres in a year).*

Evolution: From a Hydrogen Atom to a Star to a White Dwarf to a Black Hole

Hydrogen Atom to a Star: The hydrogen atoms in the universe, by gravitational attraction, form groups, grow in size and become a bigger and heavier cluster. In about 10 million years, the cluster becomes a star. Our Sun, called a G-Type star, was formed in a similar way. Its life span is about 10 billion years and our Sun is now middle aged!

Star to a White Dwarf: In 1931, Indian Nobel Laureate Prof. Subramanyan Chandrasekhar established that a special type of stars called white dwarfs are formed and they can have a maximum mass of 1.4 solar masses, which is now called the Chandrasekar limit. *(Solar Mass is the mass of our Sun, and it is used as a unit of mass).* These heavy stars are very small but brilliantly bright!

White Dwarf to a Black Hole: When a white dwarf acquires more and more material and its mass exceeds 1.4 solar mass, it becomes a black hole. If any object falls into the event horizon of a black hole, it cannot return or come out. Even light cannot escape its gravitational pull. The event horizon is a region around a blackhole which is called the point-of-no-return, where any body (even light) entering that region cannot escape and it becomes part of the blackhole.

Why is Even Light Not Able to Escape from a Black Hole?

Imagine that you are throwing a stone upwards. The stone falls back down to the ground because the earth's gravity attracts/draws it. The stone is not able to escape the earth's gravitation pull because the speed with which you have thrown it up is less than that of the downward pull. If you can throw the stone at a speed of 11.2 km per second, then the stone will have sufficient energy to escape the gravitational pull of earth once and for all. This speed is called the 'Escape Velocity' of Earth. The more massive the planet is, the greater its escape velocity. The escape velocity of some of the known space objects are as below:

S. No.	Body	Mass	Escape Velocity: Km per Second
1.	Our Moon	1/80 th Earth's mass	2.4
2.	Earth	6 crore crore crore tonnes (6 billion trillion tonnes)	11.2
3.	Jupiter	318 times Earth's mass	60
4.	Our Sun	333,000 times Earth's mass	617

Thus, we find that the speed required to escape from the planet/star becomes greater as its mass increases. It is logical to conclude that for a certain mass of the star, the escape velocity will be the same as the speed of light. At that point, all matter, including radiation and light, once it goes near such a massive body, will fall into it. Even if an object or light goes so close such a massive body, into the region called 'point of no return' or the event horizon of such a massive star, it will be sucked into the star and such a massive body will simply look like a black hole in the sky. A black hole is a supermassive star.

How Could the Black Hole be Photographed Now?

The Event Horizon Telescope (EHT) is a consortium of more than 200 scientists who worked day and night for about two

decades. It is truly an international endeavour. Funding over the years came from the U.S. National Science Foundation and many other organisations of countries around the world. The project has been scrutinising two black holes — the M87 behemoth, which harbours about 6.5 billion times the mass of our sun, and our own Milky Way Galaxy's central black hole, known as Sagittarius A, having a mass of a mere 4.3 million solar masses. The scientists decided to track and photograph the M87 blackhole, since they thought it will be easier to resolve in spite of its long distance.

No single telescope on Earth can make that observation, so the EHT team had to get creative. The researchers linked up radio telescopes in Arizona, Spain, Mexico, Antarctica and other places around the world, forming a virtual radio telescope the size of Earth. This technique is called Very Large Base Line Interferometry (VLBI). The EHT team used VLBI to capture the black hole's shadow against the light of the surrounding stars.

Conclusion

This photographing of a black hole is just the beginning. Other such holes, with different masses, spins, and orientations are potential targets for future observation. As further technological refinements are made to the EHT's capabilities, we stand a good chance of producing even finer dissections of the outer anatomy of these absurd, beautiful, and terrifying places, throwing more light about our Universe. The night sky we are familiar with, is truly deceptively calm and charming!

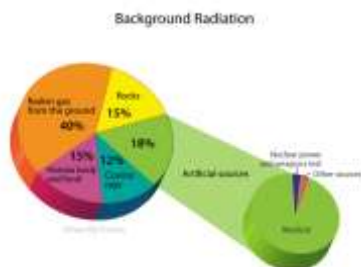
***by Dr R.Jagannathan, Editorial Adviser
Source : April 2019 issue of PreSense***

Nuclear Radiation and Nuclear Waste Management

Background Radiation

Mankind is exposed 24X7 daily to nuclear radiation, coming from three sources. One source is the radiation coming from the centre of Earth continuously at different intensity levels at different places - but it covers all places. The second source is radiation from the 'cosmos' - the space - in all directions, again 24X7. Most of the cosmic radiation is deflected towards the north and south poles of Earth, by Earth's magnetic field. The third source is our own atmosphere which emits radiation from the radon gas, generated by the Earth's crust.

The total radiation from all these above three sources put together is called 'Background Radiation' of Earth at any given place on Earth. None of us can escape from this background radiation. All of us, generation after generation, have been receiving this background radiation daily, since the formation of Earth. In a year, each of us gets about 200 mrem radiation from this background radiation.



The fourth case is the exposure to radiation for medical and other reasons. Mankind needs nuclear radiation for many uses like diagnosis of diseases, treatment of cancer, screening of seeds, increasing the shelf life of food items including vegetables, and so on. For example, onion can be stored fresh in normal sealed bags for more than 7 years if they are irradiated.

The wastes from nuclear power plants have been points of concern for the common man since the experts and scientists in the field have not come out in the media and on the street

to explain with authority to the common man about the precautions and safeguards, in as sure terms as we do about science and technology.

Characteristics of Radioactivity

One characteristic of all radioactive wastes which distinguishes them from the larger quantity of other toxic industrial wastes is that their radioactivity progressively decays and diminishes. For instance, after 40 years, the used fuel removed from a nuclear reactor has only one thousandth of its initial radioactivity remaining. All radioactive waste facilities are designed with numerous layers of protection to make sure that people remain protected for as long as it takes the radioactivity of these nuclear wastes to reduce to 'background radiation levels of Earth'.

Three Kinds of Waste

Radioactive waste can be in gaseous, liquid or solid form, and its level of radioactivity varies. The waste can remain radioactive for a few hours or several months or even hundreds of thousands of years. Depending on the level and nature of

radioactivity, radioactive wastes can be classified as Exempt Waste, Low and Intermediate Level Waste, and High-Level Waste. When the spent fuel is subjected to chemical processing, it results in three kinds of waste — Low-Level Radioactive Waste (in high volumes), Intermediate-Level Radioactive Waste (intermediate volumes), and High-Level Radioactive Waste (low volumes).



If the High-Level Waste is reprocessed, 97 per cent of this can be recycled into depleted Uranium and about 230 kg of Plutonium, which can be made into mixed oxide fuel (MOX) and used. This leaves about 700 kg of High-Level Waste a year, which needs to be environmentally isolated for a very long period of time.

Isolation is achieved by converting the High-Level Waste into glass-like solid cakes (vitrification) of about 4.8 tonnes, stored in steel canisters. Extreme care is needed in processing this highly radioactive material, and specialised facilities are necessary.

Low-Level and Intermediate Level Waste will lose their radioactivity in 50 years; High-Level Waste may take more than 10,000 years. After storage for about 50 years, these canisters can be put into deep underground (more than 3000 feet below the seal level) repositories for long-term storage.



High-Level Waste of 700 Kg after vitrification may weigh around 4.8 tonnes. A minimum of 450 tonne High-Level Waste is necessary for deep underground storage. This vitrified waste is therefore kept in Spent Fuel Storage Facility safely within the same premises. Since India has only a low level of production of nuclear energy, keeping the vitrified waste underground may take a longer time. Till such time, the vitrified waste will be accumulated and stored within the same premises safely.

America's Plan to Store High Level Nuclear Wastes

Plans to store the majority of America's spent nuclear fuel and other highly radioactive waste at a central repository underneath Yucca Mountain in the Nevada desert 80 miles from Las Vegas are under active consideration. The effect of various natural forces such as erosion and earthquakes are being analysed. The design of the site, as of now will be safe for 10,000 years and the design is now being upgraded for a safety duration of 1 million years. The Federal Nuclear Regulatory Commission (NRC) aims at the proposed facility

to "stand up to any challenge anywhere," adding that issues of health safety have been a primary concern during the planning process.

The Indian Scenario

Many debates are going on in India about the safe disposal of nuclear waste. Many activists and political leaders are on the streets, protesting against the storage of nuclear waste. Unfortunately, the protestors do not seem to have understood the concept of 'spent fuel storage' and 'nuclear waste storage'. Even the Atomic Energy Department and the Nuclear Power Corporation have done little to create awareness about this to eliminate the fear among the people.

Presently, India has 22 nuclear reactors in 7 sites, generating 6780 MW power. Construction is in progress to generate 4730 MW more power. The Government aims at 63000 MW generation of nuclear power by 2032.

Currently, Uranium is used as fuel in all the nuclear reactors. India is the only country which has developed the technology to generate power using 'Thorium'. India has more than 6 lakh tonnes of Thorium, the second richest resource in the world. In another 15 to 20 years, India will start using Thorium as fuel.

Since India generates only around 6.7 GW of power, the country is not yet facing the challenges of nuclear waste storage. However, due to lack of awareness, some of the activists and the media are creating unfounded fear in the minds of the people.

Spent Fuel Management

In March 2004, The Atomic Energy Regulatory Board (AERB) issued comprehensive guidelines on waste management for nuclear power plants using **Pressurized Heavy-Water Reactors** (PHWR), which were the mainstay of India's programme. These guidelines cover all aspects of waste management including transport, storage and disposal

facilities. Each plant is to set up its waste management organisation, plant, and related facilities before commissioning.

The scheme for the storage of spent fuel in a nuclear plant is two-fold – one facility is located within the reactor building/service building, generally known as the Spent Fuel Storage pool/bay, and the other is located away from the reactor called the Away From Reactor (AFR) Spent Fuel Storage Facility, but within the plant's premises.

A 1000 MW reactor produces 25 tonnes of spent fuel a year. As per the guidelines of the Atomic Energy Regulatory Board (AERB), the 25 tonne Uranium rod is stored in 'Spent Fuel Storage Facility' within the same premises of the reactor under water for about 5 years. During this period, the radioactivity decreases. Former Indian President Dr APJ Abdul Kalam used to describe the nuclear waste as an "Asset", as this can be recycled and reused.

Conclusion

Now mankind is at the threshold of mastering nuclear fusion technology. If we achieve this, then we can all get clean energy from nuclear fusion reactors. At that time, probably a jar of water can generate enough electricity for the entire city of Mumbai for one full year and that too without any radiation risk! Until that and other promising alternative energy sources emerge, we will be concerned about the long-term safety of storing the nuclear wastes from all our fission reactors around the world.

*by K. Srinivasan, Publisher & Managing Editor,
& Prof R. Jagannathan, Editorial Advisor
(With input from Shri V Ponraj, Former Advisor to Dr APJ
Abdul Kalam)*

Source : Junel 2019 issue of PreSense

Welcome 5G!

It is quite fashionable to use the term, or to be precise, the suffix "G" these days, to denote "Generation". It has become common too, to call anything which is latest, as "Next Gen", whether it is technology-based or something totally different. It is therefore no wonder that the suffix G gets attached to network architecture and technology like 2G, 3G, 4G and now the widely spoken about 5G.

Transition of 1G to 5G



In network technology, the earliest communication technology, later called 1G, referred to a network speed of 2.4 Kbps which is the speed of transmission of 2.4 kilobits per second *i.e.* 2400 bits of data per second, ('k' referring to approximately 1000 or precisely 1024). Later on, 2G offered 64 Kbps. 3G was used to denote 144 Kbps and the recently introduced 4G is 100 Mbps (Mega *ie* 1000 kilobits per second) speed upto 1 Gbps (gigabps) *i.e.* 1000 Mega.

The computer moves data in bits denoted by small "b". Capital "B" refers to 'byte' which is a character represented by a combination of eight bits of either zeros or ones and is used in storage and memory. In other words, computers store data in bytes and moves it in bits.

Technology pundits have not yet come to a finite conclusion on how to define 5G. Like any field with rapid advancements, network technology too is progressing not just fast but extremely fast. People say that 5G is no doubt the latest in network transmission technology and a giant leap (until of course, the next generation comes up with enhanced features to be called again the *latest!*). 5G is expected to provide upto 20 Gbps speed with millimetre waves of 15 gigahertz (in internationally accepted system of

units it is 15 billion cycles per second) and even higher frequency.

What is 5G?

Although the term 5G is often referred to in broader terms with technologies than just network speed, we often associate it with network bandwidth. However, it is not just speed. It includes other issues like software, waves and latency that are also to be studied and understood in the context of 5G. Latency, a term often discussed with network speed, denotes the delay before a transfer of data begins, following an instruction for its transfer from the computer system. To reap the advantage of 5G in mobile communication, it does not suffice if the mobile network operators alone provide it. The devices too should be compatible with the 5G technology.

Deployment

From a technology perspective, it is not just the mobile devices but the Internet of Things (IoT) much wider than mobile communication, which has much to cheer as an industry. People even say that much more than the network and other industries associated with it, it is the IoT hardware industry which pushes for the 5G technology. With the increasing popularity and deployment of IoT devices (not just computers and mobile) being accessible with an IP address like printers, microwave oven, toys, cars and all such devices, it is this IoT market that will benefit mostly by 5G. In the next couple of years, if the global players arrive at a consensus for technological standardisation, which is most likely to happen, smart cities management, agriculture planning, weather forecasting, academia and virtual reality (which is even expected to replace the existing GPS) will all be 5G-enabled. 5G in non-mobile communication (like IoT devices) may function at a reduced speed and not at the speed for cellular devices. Speed will certainly be a matter of concern in critical IoT devices like remote surgery at

corporate hospitals and real time traffic management on which research and trials have already started.

In India, Ericsson has already reportedly set up a hub in New Delhi for its 5G innovation and most of the major telecom players are also planning their deployment strategies. 5G spectrum and its sales or auction among the network players in the country will soon take place, as per the government's policy in a manner such that the technological issues are addressed, security concerns are taken care of, legal redressal is provided and political ramifications are adequately studied. TRAI has to regulate, manage and monitor the transition from 4G to 5G as a matter of policy. Device makers and cellular operators are getting ready, since it is expected that 5G will operate on higher frequencies, even upto 28GHz.



(Image Source:
www.electricalfundablog.com)

The Indian industry is quite optimistic about the massive deployment of 5G since the existing WiFi has a distance constraint of around 50 metres compared to which 5G would be easy to handle, with smaller antennas or such easily manoeuvrable devices, reaching out to not just the mobile phones but many other equipment like cars, motor cycles, surgical equipment, printers and all sorts of machinery and hardware items.

Since the mobile-cellular industry has been a funds generator, accelerating economic growth, its influence (much more than that of IoT) is expected to be huge in our country. TRAI has to decide on the spectrum allocation for 5G enabling its massive deployment, at an affordable rate and yet regulating the mobile industry with Information Technology Ministry simultaneously putting in place the regulatory, legal and mandatory guidelines to bring all IoT devices, the entire technology including the hardware,

software and the network component and not just the mobile industry, under its umbrella.

Perhaps it is this massive deployment of 5G that causes concern among a section of activists about invasion into privacy of data through the devices, doctors getting worried about the human health aspects of 5G rays, scientists getting anxious about its impact on environment and of course the common man worried about the psychological impact including an aggravated addiction on human minds. But then, that is technology – once it arrives, there is no stopping it. Let us wait and watch.

by V.Rajendran, Editor
Source : July 2019 issue of PreSense

Section VIII: Health Tips

Computer Vision Syndrome – 10 Tips to Protect the Eyes

People working on the computers continuously for a long time are likely to be affected by Computer Vision Syndrome

Symptoms

Irritation in the eyes, watering in the eyes, discomfort, fatigue, mild headache, mild eye ache, brow ache, neck pain etc.

Precautions to be Taken

1. Do not sit directly under A/C blower. Eye should not get dried up; A/c blow should not be on the eyes.



2. Keep the position of the monitor 24 inches away from your eyes; and 6 inches below your eye level.

3. Every human being blinks the eyes 30 to 40 times a minute. While reading the book, it is reduced to 20 times; while working on the computer, it is reduced to seven times per minute. This leads to dryness of the eyes leading to various symptoms listed above. At frequent intervals, take your eye from the computer and blink your eyes.

4. Follow the 20-20-20 rule. Every 20 minutes, look at an object at 20 feet away for 20 seconds.

5. Do eye exercises (like closing and opening of eyes, palming of your eyes and rotating the eyes in all directions, etc.)

6. Use an anti glare screen in the monitor or use glasses with anti-glare coating.

7. Sit in a comfortable chair with arm rest. Sitting posture is very important to avoid neck pains.

8. Use lubricating eye drops in consultation with your eye doctor.

9. Check up your eyes every six months with your eye doctor. If you have any symptoms, consult the doctor immediately.

10. Your spectacles should be prescribed based on the position of the Computer – distance and position of the monitor.

Source: May 2008 issue of Ezine PreSense

Ten Brain Damaging Habits

1. No Breakfast - People who do not take breakfast could get low blood sugar level, leading to insufficient supply of nutrients to the brain causing brain degeneration.

2. Overeating - It causes hardening of the brain arteries, leading to a decrease in mental power.

3. Smoking - It causes multiple brain shrinkage and may lead to Alzheimer disease.

4. High Sugar consumption - Too much sugar will interrupt the absorption of proteins and nutrients, causing malnutrition and may interfere with brain development.

5. Air Pollution - The brain is the largest oxygen consumer in our body. Inhaling polluted air decreases the supply of oxygen to the brain, bringing about a decrease in brain efficiency.

6. Sleep Deprivation - Sleep allows our brain to rest. Long term deprivation from sleep will accelerate the death of brain cells.

7. Head covered while sleeping - Sleeping with the head covered increases the concentration of carbon dioxide and decreases concentration of oxygen, leading to brain damaging effects.

8. Working your brain during illness - Working hard or studying with sickness may lead to a decrease in effectiveness of the brain as well as damage the brain.

9. Lacking in stimulating thoughts - Thinking is the best way to train our brain, lacking in brain stimulation thoughts may cause brain shrinkage.

10. Talking Rarely - Intellectual conversations will promote the efficiency of the brain.

Source: June 2008 issue of Ezine PreSense

ABC of Diabetes

Diabetes is a chronic disease that is BEST MANAGED BY YOU, with the support from your family, friends, and the healthcare team. Most people think of diabetes as a disease of high blood sugar, but for many people it is associated with high blood pressure and high cholesterol. Controlling ALL of these factors is important to REDUCE the risk of developing the major complications of diabetes: blindness, foot disease, kidney failure, heart attack, and stroke. In fact, the major cause of disability and death in diabetes is heart disease and stroke. For many persons with diabetes, controlling blood pressure and cholesterol, taking aspirin, and NOT smoking are the most important steps that they can take.

DIABETES SELF-MANAGEMENT HEALTH TIPS - ABCs of

Diabetes: It is important for you to know what the optimum and healthy levels for blood sugar, blood pressure and blood cholesterol are. **A1c-** Hemoglobin A1c is a 2-3 month average of your blood sugar level. Know your target number!

Blood Pressure: Controlling blood pressure is the most effective treatment for preventing cardiovascular disease in persons with diabetes. Check your blood pressure at home. Have your blood pressure checked at every doctor's visit. Know your target level!

Cholesterol: Know your cholesterol level goal to protect your heart! Good/Bad Triglycerides (HDL) (LDL)

Eyes: Know whether or not you have signs of diabetes related eye disease (retinopathy), and establish a schedule for a dilated (drops in your eyes) eye examination by an eye specialist (optometrist or ophthalmologist).

Feet: Check your feet daily. Tell your health provider about any changes. Symptoms of pain and numbness in your feet are not always present, so ask your provider if you see signs of blood vessel or nerve damage in your feet. If you have blood vessel or nerve damage, you are at higher risk for developing severe foot conditions and should be under the care of a foot specialist.

Kidney Function: Protein in urine is an early sign of kidney disease. Your health provider can determine this from a urine and blood test.

Sick Day Management: Common illnesses can cause problems for people with diabetes. When you are sick, check your blood sugar every few hours. If your blood sugar remains over 250 or is repeatedly below 70, contact your healthcare team or go to the hospital. Take your insulin or diabetes pills unless you cannot take any food or liquid. Drink liquids every hour to avoid dehydration.

Smoking: If you smoke or use tobacco, **STOP!**

Source: July 2008 of Ezine PreSense

Attitude is everything: A simple calculator

Level of				Outcome in	
Skills	+	Attitude	=	Career & Life	Health
Good	+	Good	=	Extraordinary success	Very good
Bad	+	Good	=	Success (with efforts and initiatives)	good
Good	+	Bad	=	Temporary success and final downfall	Bad
Bad	+	Bad	=	Disaster	Bad

Source: August 2006 issue of Ezine PreSense

Premenstrual Syndrome (PMS)

Working women encounter many challenges which women of previous generation never faced. Changing life style, work pressure, aspirations have aggravated certain disorders which are never heard of in Indian women. PMS is one of the serious groups of symptoms which affect most of the working women.

Premenstrual syndrome (PMS) is the name of a group of symptoms that usually start up to 14 days before menstruation. The symptoms usually stop soon after period begins. Most women feel some mild discomfort before their periods. But if you have PMS, you may feel so anxious, depressed or uncomfortable that you can't cope at home or at work. Some of the symptoms of PMS are back pain, bloated abdomen, changes in appetite including cravings for certain foods, constipation, spells of distress, depression, rapid heartbeat, irritability, tension or anxiety, tiredness, headache, hot flushes, joint pain, mood swings, disinterest in sex, tender and swollen breasts, difficulty in concentration, trouble sleeping, swollen hands or feet, wanting to be alone and weight gain.

What causes PMS?

It seems to be linked in part to changes in hormone levels during the menstrual cycle. PMS is not caused by stress or psychological problems, though these may make the symptoms of PMS worse.

How is PMS diagnosed?

Your doctor will ask you to keep track of your symptoms on a calendar. If your symptoms follow the same pattern each month, you may have PMS.

How is PMS treated?

There is no cure for PMS, but eating a healthy diet, exercising regularly and taking medicine may help. Your doctor will talk to you about whether you need to change your diet and exercise habits. He or she may also prescribe medicine for you, depending on what your symptoms are and how severe they are. Medicines that can be prescribed include diuretics, antidepressants and birth control pills.

What are Diuretics?

Diuretics help your body get rid of extra sodium and fluid. They can ease bloating, weight gain, breast pain and abdominal pain. Diuretics are usually taken just before you would normally experience these symptoms in your menstrual cycle.

Do Antidepressants Help?

Antidepressants can help in cases of severe irritability, depression and anxiety that some women with PMS have. These medicines are usually taken every day.

Tips on Controlling PMS

- Eat complex carbohydrates (such as whole grain breads, pasta and cereals), fibre and protein. Cut back on sugar and fat.
- Avoid salt for the last few days before your period to reduce bloating and fluid retention.
- Cut back on caffeine to feel less tense and irritable and to ease breast soreness.
- Try eating up to 6 small meals a day instead of 3 larger ones.
- Get aerobic exercise. Work up to 30 minutes, 4 to 6 times a week.
- Get plenty of sleep--about 8 hours a night.

- Keep to a regular schedule of meals, bedtime and exercise.
- Try to schedule stressful events for the week after your period.

Identifying this problem, sensitizing life partners and lifestyle changes and medications, can help woman to cope with the symptoms and make life comfortable for women as well as their family.

Contributed by Dr N Suchitra, Consultant Gynecologist, Tiruchy.

Source: August 2008 issue of Ezine PreSense

ABC of Dental Care

Dental Problems

Dental problems can range from toothaches and tooth decay to cold sores, abscesses and dental phobias. Toothaches are a common dental problem, and can occur even if one is diligent about oral care. However, what seems like a toothache is often the symptom of another condition, trigeminal neuralgia.

Cosmetic Dentistry

Cosmetic dentistry rectifies gummy smiles, seal gaps, fixes chips and cracks, correct rotations and replaces worn out and discoloured teeth.



Teeth Whitening

Dental surveys show that 80% of the people prefer whiter teeth. The answer is teeth whitening through a simple and safe procedure called dental bleaching. Bleaching lightens and brightens the teeth. It works on stains and is gentle on the teeth. Coffee, tea, tobacco, red wine, antibiotics and age can stain teeth.

Tooth Damage and Dental Emergencies

As we all know, toothaches and any type of oral injury can be extremely painful and should be seen by a dentist immediately. These emergencies include broken teeth, teeth that have been knocked out, or teeth that have been forced out of the socket. In some emergencies, the cheeks, lips, or gums near the uprooted teeth, will have cuts or abrasions. If a tooth has been recently knocked out, the first thing to do is to look for that tooth. When the tooth is found, it should be gently scrubbed to get rid of any dirt or debris. Once it is cleaned, it should be placed back in the mouth between the cheek and the gums.

Common Causes of Tooth Decay and Infection - Dental Care and Hygiene

Sometimes food particles get lodged between the teeth. These residual food particles in the mouth breed bacteria. These bacteria can cause infection and tooth decay. Proper oral hygiene can minimise tooth decay and infection. Some methods for effective daily dental care are as follows:

Brush your teeth every day. Brushing removes the residual food particles and plaque. The tooth is embedded in the jaw. (The visible portion of the tooth is called the crown and the hidden, embedded part of the tooth is called the root.) Remember to use a good quality tooth brush and tooth paste.

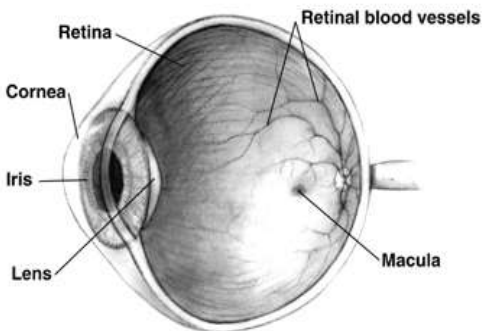
Flossing should be done every day. Flossing helps remove residual food particles and plaque that the tooth brush fails to remove. A simple practice of rinsing the mouth with water after every meal can be effective in protecting the teeth from infection and decay. Fluorides are useful to prevent tooth decay or caries. It is good to use a tooth paste with the correct amount of fluoride in it.

***Article by Dr Chandra Gupta. Dentist
Source: September 2008 issue of Ezine PreSense***

Macular hole

What is a Macular Hole?

A macular hole is a small break in the macula, located in the center of the eye's light-sensitive tissue called the retina. The macula provides the sharp, central vision we need for reading, driving, and seeing fine detail.



**Why does it occur,
at what age and in
how many percent**

of patients is it noted?

Most of the eye's interior is filled with vitreous, a gel-like substance that fills about 80 percent of the eye and helps it maintain a round shape. The vitreous contains millions of fine fibers that are attached to the surface of the retina. As we age, the vitreous slowly shrinks and pulls away from the retinal surface. Natural fluids fill the area where the vitreous has contracted. This is normal. In most cases, there are no adverse effects.

However, if the vitreous is firmly attached to the retina when it pulls away, it can tear the retina and create a macular hole. Also, once the vitreous has pulled away from the surface of the retina, some of the fibers can remain on the retinal surface and can contract. This increases tension on the retina and can lead to a macular hole. It is generally seen in older age group above 60 years of age. But sometimes and quite rarely, it may occur in younger people also. Some people with high myopia (minus powered spectacles) may develop it at younger age. Sometimes it occurs due to some blunt injury to the eye.

Macular hole can occur in approximately 0.17 to 3.3 % of people among the general population.

What are the Symptoms of a Macular Hole?

Initially it causes distortion of central vision. Straight lines may appear crooked. Later on central vision reduces making reading and writing difficult.

How is Surgery Done?

Macular hole requires surgery. In this surgical procedure – called a **vitrectom** – the vitreous gel is removed. A fine membrane on the surface of the retina surrounding the hole, called internal limiting membrane, is peeled off to prevent it from pulling on the retina. The eye is filled with a bubble containing a mixture of air and gas. The bubble acts as an internal, temporary bandage that holds the edge of the macular hole in place as it heals. It is gradually reabsorbed and the eye is filled with natural fluids. Surgery is performed under local anesthesia.

Following surgery, patients must remain in a face-down position, normally for two weeks. This position allows the bubble to press against the macula. Maintaining a face-down position is crucial to the success of the surgery. Because this position can be difficult for many people, it is important to discuss this with your doctor before surgery.

What is the Risk of Developing a Macular Hole in the Other Eye?

There is a 10-15 % risk of developing a macular hole in the other eye. However, there are no preventive measures available as yet.

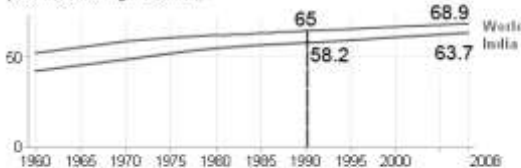
***By K. Srinivasan, Editor in Chief
with inputs from Dr Dhanashree Ratra, MS, DNB,
FRCSEd,
Senior Consultant, Sankara Nethralaya, Chennai
Source: February 2009 issue of Ezine PreSense***

Life Expectancy Has Gone up; The Present Generation May Spend More Years Sick

According to World Bank report, Life expectancy has gone up from 58.2 to 63.7 years in India. Though apparently, it gives an impression of longevity of life, in reality, the people beyond 50 get extension of life, due to various medical support and due to their healthy life-style and scientific food habit in their growing days.

Life expectancy

The average number of years a newborn is expected to live with current mortality patterns remaining the same.



Data source: World Bank, World Development Indicators - Last updated December 22, 2010

Presently doctors say that the traditional old age diseases like hyper tension, cardiac problems, cancer, diabetes, obesity, stress are now

attacking the younger generation even at thirties and forties. This is mainly due to wrong food habits, lack of physical exercise, mental tension due to deadlines, negative thoughts, unhealthy life style, etc.

Even if the life expectancy is growing, in future, it is feared that people may spend more years being sick compared to our earlier generation. In the past two decades, people have started spending their life with serious illness and lack of functional mobility.

We need to create an environment where people die without experiencing disease, functioning loss and disability.

Source: December 2010 issue of Ezine PreSense

2500 People Die Every Day Due to Tobacco Use in India - Tobacco and Alcohol – a Deadly Combination

As per the latest study, there are 94 million smokers in India. Of these, about 14 million are ill with chronic obstructive pulmonary disease (COPD). It is the fourth leading cause of adult deaths in India and it has been found to be mostly caused by smoking. In India, about 2500 people die every day from tobacco use, and about 5500 youth start this habit of using tobacco daily. Smoking of Bidis and Cigars cause early death. Tobacco and Alcohol is a deadly combination.



Why do people smoke? Apart from flavour, stress, pleasure, boredom, friendship and taste, there is really one reason for smoking — the rising tide of anxieties. Unfortunately, when the iconic film celebrities like Amitabh Bachchan, Shahrukh Khan, Rajinikanth and Aishwarya Rai smoke in films, they influence many youngsters to take up smoking.

Statistics show that every year, 800,000 new cancer cases are registered — 320,000 of whom suffer from head and neck cancers largely attributed to tobacco habits. While tobacco claims about 4.9 million deaths annually globally, an alarming one million of them are from India. Smoking can cause cancer (lung, mouth, kidney, pancreas and many more to name a few), heart disease, respiratory illnesses and severe dysmenorrhea. Smoking can also cause impotence, ulcers and fertility problems and it does not just harm smokers but the people around also get affected. A passive smoker most likely suffers from lung cancer, glue ear and asthma in children.

A pregnant woman who smokes unintentionally passes harmful chemicals to the unborn child and increases the risk of a miscarriage or neonatal death of the baby.

Input from Dr Chandra Gupta

Source: August 2012 issue of Ezine PreSense

Generic Medicines

Generic medicines are the unbranded bio-equivalent form of drug which is commensurate with branded drugs in terms of their therapeutic value. They are those medicines that are available after the expiry of the patent protection granted to the original researcher of the drug.

Although they are an equivalent substitute to their branded counterparts in all aspects, generic drugs are typically found substantially cheaper than the latter. It is estimated that one could save two-thirds of the cost of the branded drug if one opted for generic drug.

Despite its undeniable potential to reduce the cost of healthcare exponentially, most of the people in India are ignorant about its availability as an option. Some people even suspect the genuineness in the quality of generic medicine because it is inexpensive. Thus, people end up buying branded drugs without realising that they could obtain the same type of medicine for a lower price.

The Influence of *Satyamev Jayate*

Generic medicine first caught the attention of the general public of India when this subject was covered in Aamir Khan's TV programme, '*Satyamev Jayate*' (Truth Triumphs), aired on 27th May 2012. The episode created large scale awareness about generic medicines among the common people. The manipulative methods of the medical mafia were also revealed to the people. This created a questionable impression about the reputation of Indian doctors in general. A cluster of 21 medical institutions, including the Indian Medical Association (IMA) demanded an unconditional apology from Aamir Khan for 'defamation' of the Indian doctors.

Availability of Generic Medicine

Unfortunately, generic medicines are rarely found in general medical outlets. Most of the medical outlets are inclined to sell branded medicines instead of generic medicines. The main reason for this is that people tend to have a pre-conceived notion that branded medicines are better than generic medicines. Besides, branded drugs tend to offer higher margins in prices for the pharmacists, while generic medicines are capped in their prices. Till date, the information about the availability of generic medicines is suppressed so that many people are unaware of its availability in the market.

Jan Aushadhi

Jan Aushadhi programme was launched by the Government of India in the year 2008, to provide safe and effective generic drugs at affordable prices. However, *Jan Aushadhi* has so far met with little success.

As of May 2016, there are 261 stores operational in India, predominantly in the northern parts of the country. A total of 615 different generic medicines have been identified. More details can be obtained from the official website:

<http://janaushadhi.gov.in/>

An announcement was made by the Government of India a day after the Union Budget 2016 that it planned to open 3,000 *Jan Aushadhi* stores throughout the country during 2016-2017. Many experts including doctors are sceptical about this model, claiming that the government needed to build trust among the people about generic medicines. Besides, there is still no tested

Jan Aushadhi Stores

Same medicines at higher prices? Or Same medicines at lower prices?

Daam kam, Dawai Uttam

Jan Aushadhi Stores is a chain of leading variety pharmacies for General Dispensing to offer quality medicines at much lower prices.

Jan Aushadhi stores have been opened in Andhra Pradesh, Odisha, Haryana, Punjab, Rajasthan, Uttarakhand and Orissa. (More Jan Aushadhi branches to be opened soon)

Medicine	Generic	Branded	Jan Aushadhi Price (Rs.)	Generic Price (Rs.)	Generic Margin
Aspirin (100 mg)	100 mg	100 mg	10.00	10.00	0.00
Aspirin (500 mg)	500 mg	500 mg	20.00	20.00	0.00
Paracetamol (500 mg)	500 mg	500 mg	10.00	10.00	0.00
Paracetamol (1000 mg)	1000 mg	1000 mg	20.00	20.00	0.00
Paracetamol (2000 mg)	2000 mg	2000 mg	40.00	40.00	0.00
Paracetamol (4000 mg)	4000 mg	4000 mg	80.00	80.00	0.00
Paracetamol (8000 mg)	8000 mg	8000 mg	160.00	160.00	0.00
Paracetamol (16000 mg)	16000 mg	16000 mg	320.00	320.00	0.00
Paracetamol (32000 mg)	32000 mg	32000 mg	640.00	640.00	0.00
Paracetamol (64000 mg)	64000 mg	64000 mg	1280.00	1280.00	0.00
Paracetamol (128000 mg)	128000 mg	128000 mg	2560.00	2560.00	0.00
Paracetamol (256000 mg)	256000 mg	256000 mg	5120.00	5120.00	0.00
Paracetamol (512000 mg)	512000 mg	512000 mg	10240.00	10240.00	0.00
Paracetamol (1024000 mg)	1024000 mg	1024000 mg	20480.00	20480.00	0.00
Paracetamol (2048000 mg)	2048000 mg	2048000 mg	40960.00	40960.00	0.00
Paracetamol (4096000 mg)	4096000 mg	4096000 mg	81920.00	81920.00	0.00
Paracetamol (8192000 mg)	8192000 mg	8192000 mg	163840.00	163840.00	0.00
Paracetamol (16384000 mg)	16384000 mg	16384000 mg	327680.00	327680.00	0.00
Paracetamol (32768000 mg)	32768000 mg	32768000 mg	655360.00	655360.00	0.00
Paracetamol (65536000 mg)	65536000 mg	65536000 mg	1310720.00	1310720.00	0.00
Paracetamol (131072000 mg)	131072000 mg	131072000 mg	2621440.00	2621440.00	0.00
Paracetamol (262144000 mg)	262144000 mg	262144000 mg	5242880.00	5242880.00	0.00
Paracetamol (524288000 mg)	524288000 mg	524288000 mg	10485760.00	10485760.00	0.00
Paracetamol (1048576000 mg)	1048576000 mg	1048576000 mg	20971520.00	20971520.00	0.00
Paracetamol (2097152000 mg)	2097152000 mg	2097152000 mg	41943040.00	41943040.00	0.00
Paracetamol (4194304000 mg)	4194304000 mg	4194304000 mg	83886080.00	83886080.00	0.00
Paracetamol (8388608000 mg)	8388608000 mg	8388608000 mg	167772160.00	167772160.00	0.00
Paracetamol (16777216000 mg)	16777216000 mg	16777216000 mg	335544320.00	335544320.00	0.00
Paracetamol (33554432000 mg)	33554432000 mg	33554432000 mg	671088640.00	671088640.00	0.00
Paracetamol (67108864000 mg)	67108864000 mg	67108864000 mg	1342177280.00	1342177280.00	0.00
Paracetamol (134217728000 mg)	134217728000 mg	134217728000 mg	2684354560.00	2684354560.00	0.00
Paracetamol (268435456000 mg)	268435456000 mg	268435456000 mg	5368709120.00	5368709120.00	0.00
Paracetamol (536870912000 mg)	536870912000 mg	536870912000 mg	10737418240.00	10737418240.00	0.00
Paracetamol (1073741824000 mg)	1073741824000 mg	1073741824000 mg	21474836480.00	21474836480.00	0.00
Paracetamol (2147483648000 mg)	2147483648000 mg	2147483648000 mg	42949672960.00	42949672960.00	0.00
Paracetamol (4294967296000 mg)	4294967296000 mg	4294967296000 mg	85899345920.00	85899345920.00	0.00
Paracetamol (8589934592000 mg)	8589934592000 mg	8589934592000 mg	171798691840.00	171798691840.00	0.00
Paracetamol (17179869184000 mg)	17179869184000 mg	17179869184000 mg	343597383680.00	343597383680.00	0.00
Paracetamol (34359738368000 mg)	34359738368000 mg	34359738368000 mg	687194767360.00	687194767360.00	0.00
Paracetamol (68719476736000 mg)	68719476736000 mg	68719476736000 mg	1374389534720.00	1374389534720.00	0.00
Paracetamol (137438953472000 mg)	137438953472000 mg	137438953472000 mg	2748779069440.00	2748779069440.00	0.00
Paracetamol (274877906944000 mg)	274877906944000 mg	274877906944000 mg	5497558138880.00	5497558138880.00	0.00
Paracetamol (549755813888000 mg)	549755813888000 mg	549755813888000 mg	10995116277760.00	10995116277760.00	0.00
Paracetamol (1099511627776000 mg)	1099511627776000 mg	1099511627776000 mg	21990232555520.00	21990232555520.00	0.00
Paracetamol (2199023255552000 mg)	2199023255552000 mg	2199023255552000 mg	43980465111040.00	43980465111040.00	0.00
Paracetamol (4398046511104000 mg)	4398046511104000 mg	4398046511104000 mg	87960930222080.00	87960930222080.00	0.00
Paracetamol (8796093022208000 mg)	8796093022208000 mg	8796093022208000 mg	175921860444160.00	175921860444160.00	0.00
Paracetamol (17592186044416000 mg)	17592186044416000 mg	17592186044416000 mg	351843720888320.00	351843720888320.00	0.00
Paracetamol (35184372088832000 mg)	35184372088832000 mg	35184372088832000 mg	703687441776640.00	703687441776640.00	0.00
Paracetamol (70368744177664000 mg)	70368744177664000 mg	70368744177664000 mg	1407374883553280.00	1407374883553280.00	0.00
Paracetamol (140737488355328000 mg)	140737488355328000 mg	140737488355328000 mg	2814749767106560.00	2814749767106560.00	0.00
Paracetamol (281474976710656000 mg)	281474976710656000 mg	281474976710656000 mg	5629499534213120.00	5629499534213120.00	0.00
Paracetamol (562949953421312000 mg)	562949953421312000 mg	562949953421312000 mg	11258999068426240.00	11258999068426240.00	0.00
Paracetamol (1125899906842624000 mg)	1125899906842624000 mg	1125899906842624000 mg	22517998136852480.00	22517998136852480.00	0.00
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Paracetamol (288230376151711744000 mg)	288230376151711744000 mg	288230376151711744000 mg	5764607523034234880.00	5764607523034234880.00	0.00
Paracetamol (576460752303423488000 mg)	576460752303423488000 mg	576460752303423488000 mg	11529215046068469760.00	11529215046068469760.00	0.00
Paracetamol (1152921504606846976000 mg)	1152921504606846976000 mg	1152921504606846976000 mg	23058430092136939520.00	23058430092136939520.00	0.00
Paracetamol (2305843009213693952000 mg)	2305843009213693952000 mg	2305843009213693952000 mg	46116860184273879040.00	46116860184273879040.00	0.00
Paracetamol (4611686018427387904000 mg)	4611686018427387904000 mg	4611686018427387904000 mg	92233720368547758080.00	92233720368547758080.00	0.00
Paracetamol (9223372036854775808000 mg)	9223372036854775808000 mg	9223372036854775808000 mg	184467440737095516160.00	184467440737095516160.00	0.00
Paracetamol (18446744073709551616000 mg)	18446744073709551616000 mg	18446744073709551616000 mg	368934881474191032320.00	368934881474191032320.00	0.00
Paracetamol (36893488147419103232000 mg)	36893488147419103232000 mg	36893488147419103232000 mg	737869762948382064640.00	737869762948382064640.00	0.00
Paracetamol (73786976294838206464000 mg)	73786976294838206464000 mg	73786976294838206464000 mg	1475739525896764129280.00	1475739525896764129280.00	0.00
Paracetamol (147573952589676412928000 mg)	147573952589676412928000 mg	147573952589676412928000 mg	2951479051793528258560.00	2951479051793528258560.00	0.00
Paracetamol (295147905179352825856000 mg)	295147905179352825856000 mg	295147905179352825856000 mg	5902958103587056517120.00	5902958103587056517120.00	0.00
Paracetamol (590295810358705651712000 mg)	590295810358705651712000 mg	590295810358705651712000 mg	11805916207174113034240.00	11805916207174113034240.00	0.00
Paracetamol (1180591620717411303424000 mg)	1180591620717411303424000 mg	1180591620717411303424000 mg	23611832414348226068480.00	23611832414348226068480.00	0.00
Paracetamol (2361183241434822606848000 mg)	2361183241434822606848000 mg	2361183241434822606848000 mg	47223664828696452136960.00	47223664828696452136960.00	0.00
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Paracetamol (9444732965739290427392000 mg)	9444732965739290427392000 mg	9444732965739290427392000 mg	188894659314785808547840.00	188894659314785808547840.00	0.00
Paracetamol (18889465931478580854784000 mg)	18889465931478580854784000 mg	18889465931478580854784000 mg	377789318629571617095680.00	377789318629571617095680.00	0.00
Paracetamol (37778931862957161709568000 mg)	37778931862957161709568000 mg	37778931862957161709568000 mg	755578637259143234191360.00	755578637259143234191360.00	0.00
Paracetamol (75557863725914323419136000 mg)	75557863725914323419136000 mg	75557863725914323419136000 mg	1511157274518286468382720.00	1511157274518286468382720.00	0.00
Paracetamol (151115727451828646838272000 mg)	151115727451828646838272000 mg	151115727451828646838272000 mg	3022314549036572936765440.00	3022314549036572936765440.00	0.00
Paracetamol (302231454903657293676544000 mg)	302231454903657293676544000 mg	302231454903657293676544000 mg	6044629098073145873530880.00	6044629098073145873530880.00	0.00
Paracetamol (604462909807314587353088000 mg)	604462909807314587353088000 mg	604462909807314587353088000 mg	12089258196146291747061760.00	12089258196146291747061760.00	0.00
Paracetamol (1208925819614629174706176000 mg)	1208925819614629174706176000 mg	1208925819614629174706176000 mg	24178516392292583494123520.00	24178516392292583494123520.00	0.00
Paracetamol (2417851639229258349412352000 mg)	2417851639229258349412352000 mg	2417851639229258349412352000 mg	48357032784585166988247040.00	48357032784585166988247040.00	0.00
Paracetamol (4835703278458516698824704000 mg)	4835703278458516698824704000 mg	4835703278458516698824704000 mg	96714065569170333976494080		

mechanism in place to ensure these medicines are time- and laboratory tested.

Root Cause Analysis

In countries like USA and UK, 70% of the doctor's prescriptions are for generic medicine. This is due to an active governing body, the Food and Drug Administration (FDA) in place in the country to regulate the safety of the medicines.

In India, despite a directive from the Medical Council of India (MCI) to prescribe generic drugs, doctors are reluctant to prescribe generic medicines, claiming they were not as effective as their branded equivalents. 98% of doctors' prescriptions are for branded medicines and the people are forced to buy the brand suggested by the doctor. This escalates the overall healthcare cost of the country.

Alternative to Generic Medicine

Generic medicines have a long way to go before catching up in India but there is an alternative available for buying medicines at competitive prices. Since branding is a subjective term and every company has a different way of branding their medicines, there is a big difference in the pricing among the brands.

Thanks to the power of the internet, there are many websites which provide the generic medicinal equivalent to the prescribed branded medicine. They also list out all the branded medicines available in the market. One such project which is currently the most reputable one is an initiative by the late Dr M.M. Mittal (<http://www.medguideindia.com>). People can search for the brand of medicine that is priced to suit their budget and their availability, and buy these drugs from wholesalers or large pharmacy shops where the chances of obtaining these specific medicines are better. There are now many pharmacies available online, offering

wider choices in the brands and generic to help the people to choose from.

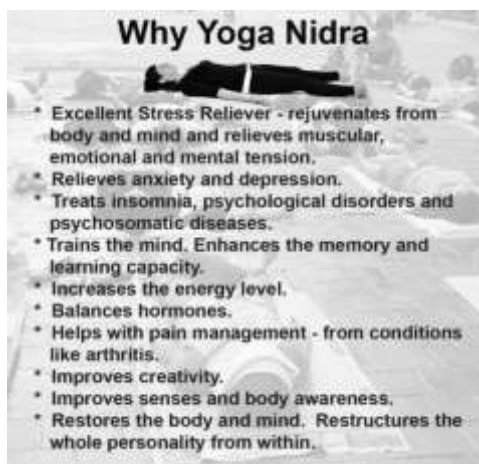
***By Sukruti Vadula Narayanan, Editorial Team
With input from Vivek Hari Narayanan
Source : May 2016 issue of Ezine PreSense***

Yoga Nidra, a Powerful Tool for Body-Mind Relaxation

Body-Mind Relaxation

With changes in life style and pace of modern life, many people today, including youngsters, suffer from diabetes, hypertension, migraine, asthma, ulcer, digestive disorders and skin diseases mainly because of tensions in the body and mind. Even cancer and heart diseases stem from tension. Although modern medicine has tackled these problems in many ways, it is unable to resolve the problems completely. The real problem does not lie in the body, but in the 'mind'. Yoga and meditation provide ways to relax the body and the mind.

Yoga Nidra is an ancient but little-known yogic practice that is becoming increasingly popular globally, as a form of meditation and mind-body therapy. *Yoga Nidra* is a systematic form of guided relaxation that is done for 35 to 40 minutes at one time.



Normally, we consider 'sleep' or reclining on an easy chair, taking tea or a drink, and watching television as relaxation. Scientifically, they are not relaxation and they are only sensory diversions. For absolute relaxation, one must remain in a state of awakesness and awareness. *Yoga Nidra* is a state of dynamic sleep. *Yoga Nidra* is a systematic method of inducing complete physical, mental and emotional relaxation. Researchers have proved that those who adopt this technique in their daily routine experience profound positive changes in their sleeping habits and their health.

State between Sleep and Wakefulness

Through a guided session of *Yoga Nidra*, a person can be taken to the state between sleep and wakefulness. In this threshold state, contact with the subconscious and unconscious dimensions occurs spontaneously. In this state where a person is neither in deep sleep nor completely awake, whatever impressions are made in the mind at that time become powerful, and they stay imprinted there. Experiments have proved that knowledge given in this stage is well received by the person. In the ancient times, *Rishis* have imparted knowledge through this technique.

Patanjali describes this state of consciousness as '*pratyahara*', where the mind and mental awareness are dissociated from the sensory channels. *Yoga Nidra* is one aspect of *pratyahara*, which leads to a higher state of concentration and *samadhi*.

Yoga Nidra and Meditation

Yoga Nidra takes a person to a 'hypnagogic' state, that is between wakefulness and sleep. In this state, the mind is highly receptive. In meditation, one remains in the waking state of consciousness and gently focusses the mind, while allowing thought patterns, emotions, sensations and images to rise and go.

Benefits of Yoga Nidra

Swami Satyanada Saraswathi, Founder of Bihar School of Yoga, and who has done an extensive study on *Yoga Nidra* and authored a book on *Yoga Nidra*, says in his book, "The mind is something like a motor car. If you do not handle it properly, you will meet with an accident. But if you are a good driver you know how to manage, whether you are driving a motor car or a truck. Now in *Yoga Nidra*, sometimes, you can go very deep. Although this practice is presently only intended to offer relaxation, its ultimate

purpose is take you deep into the state where you are completely united with your inner being”.

Yoga Nidra is becoming increasingly popular in the United State of America. “After I started on *Yoga Nidra* guided



meditation, I felt a lot of change in the quality of my sleep, my emotional state and my level of clarity. *Yoga Nidra* prepares you to unwind by detaching your mind

from repetitive thinking, thereby releasing emotional conflicts, hidden fears and anxious thoughts. When I deal with clients having problems with insomnia and acute anxiety issues in my coaching sessions, I strongly advise practising *Yoga Nidra* in their daily routine. The results of this practice are way more effective than any medicinal support available”, says Simi Arora, Life Coach from New York in an exclusive interview with PreSense.

She also adds, “I personally have met several Americans who use meditation very frequently in their life to help them deal with anxiety issues and also help them unwind from daily life pressures. One of my clients who practised *Yoga Nidra* got such profound results that it actually healed his insomnia completely. Even in other parts of the western world, it is embraced by many people to help them alleviate the symptoms of stress and insomnia. Even though the science of meditation was cultivated in the eastern world, it is no longer confined to that region.”

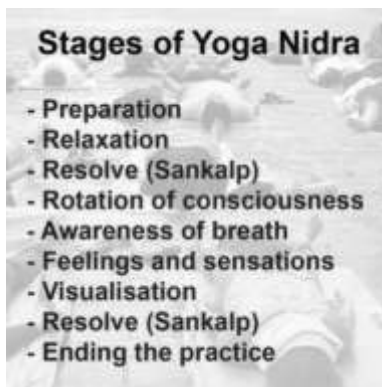
Dr A.V. Srinivasan, internationally renowned neurologist and former president of ‘Indian Academy of Neurologists’ also agrees that meditation and *Yoga Nidra* help to reduce depression, anxiety, stress, tension and blood pressure.

Various studies indicate that *Yoga Nidra* could help soldiers and veterans suffering from post-traumatic stress disorder (PTSD).

How to Practise?

Yoga Nidra is very easy to practise. Unlike meditation, which is done in a sitting posture, *Yoga Nidra* is done in 'Savasana' (lying down posture). Many creative thoughts have come out in this hypnagogic state.

As already discussed, the mind accepts any suggestion during the hypnagogic state, which is the state between wakefulness and sleep. Any resolution or *Sankalpa* suggested during that state will be powerful enough to transform the personality and direction in life.



Yoga Nidra can be practised after regular walking, yoga or exercises. One should practise it on an empty stomach or two hours after food. During the *Yoga Nidra* practice, one should ensure that nobody disturbs them by making noise or touching his/her body.

There are several guided *Yoga Nidra* sessions available on YouTube. PreSense suggests that interested readers download the audio guidance by Swami Niranjananda Saraswathi, the Head of Bihar School of Yoga. He is a born Yogi and has done extensive research on this subject. He was awarded the 'Padma Bhushan' in 2017 by the Government of India for his excellent contribution towards Yoga.

Readers may download the video/audio of guided *Yoga Nidra* from the following links.

For beginners: <https://youtu.be/iXbFQYzsAos>

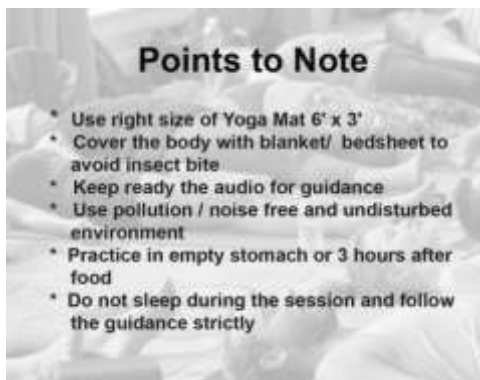
For second level practitioners:

<https://youtu.be/WN6q9xQHojI>

Alternatively, the readers may download both the audios from our Google drive link:

<https://goo.gl/kS6vHD>

Suggested book for reading: *Yoga Nidra* by Swami Satyananda Saraswati (available in Amazon and Flipkart)



- * Use right size of Yoga Mat 6' x 3'
- * Cover the body with blanket/ bedsheet to avoid insect bite
- * Keep ready the audio for guidance
- * Use pollution / noise free and undisturbed environment
- * Practice in empty stomach or 3 hours after food
- * Do not sleep during the session and follow the guidance strictly

(Note: *Yoga Nidra* is a very simple technique. Any person of the age of 15 years and above, with normal health can practise independently, with the help of audio guidance. However, people with any chronic health issues may consult their family doctor beforehand, and begin the practice with the help of a trained Yoga Teacher.)

***By K. Srinivasan, Publisher & Managing Editor
With input from Shri Suresh Veera, Senior Yoga
Teacher, Chennai
Source : December 2017 issue of Ezine PreSense***

Siddha System of Medicine – Its Potential and Its Challenges

Outbreak of Dengue and Siddha Medicine



The recent outbreak of the Dengue Fever in the Indian state of Tamil Nadu has once again brought '*Nilavembu Kashayam*', to centre-stage. *Nilavembu Kashayam* is a Siddha medicine made out of nine herbs. This medicine is used both for the prevention and the cure of Dengue, Spine Flu and Chikunguniya Fevers. The Government of Tamil Nadu has been distributing this medicine in all public places and it also promotes it through the media. In spite of the assurances given by the National Institute of Siddha (NIS) and the Central Council of Research for Siddha (CCRS), a controversy was raised by the comments of some celebrities like actor, Kamal Hassan, and part of the media about the 'scientific validation' of this *Kashayam* (herbal extraction). In spite of this challenge, the Government went ahead with its distribution, as there was no alternative treatment in allopathic medicine. Earlier in 2015, when Chennai suffered heavy floods, the timely administration of *Nilavembu Kashayam* helped prevent an epidemic, saving thousands of lives. Some of the other states in India have started showing interest in the administration of *Nilavembu* for treatment of these diseases.

The *PreSense* Editorial Team initiated a study to understand the uniqueness and challenges faced by the practitioners of the Siddha medicine system. The Team interacted with several practitioners and Siddha promoters, and also visited institutions to obtain a first-hand impression.

Siddha System of Medicine

Among the traditional systems of medicine in the world, India's Ayurveda and Siddha are said to be very ancient.

Although both the systems of medicine are very similar in practice, Ayurveda is essentially written in Sanskrit, and Siddha is worded in Tamil.

Siddhas were the spiritual scientists of ancient India and they laid the foundation for this system of medicine. They possessed tremendous intellectual powers and they lived much longer, sustaining their bodies. They had in-depth knowledge about body and soul. They had expertise in how to use herbs, minerals, metals, poisonous drugs, etc. as medication for treating ailments. By controlling yogic power, they acquired super natural powers. The Siddha system of medicine is stated to be more than 5,000 years old thus proving its efficacy.

Agasthiyar, Bhogar, Theraiyar, Thirumoolar and their disciples were the main *Siddhas* who wrote several hymns in poetic form, on various aspects of the medical system. According to experts, around 100,000 available poems have been published. In these poems, they discuss the anatomy of the body, the pathology, the physiology, the pharmacology and about preventive medicines. Thousands of years ago, *Siddhas* had classified the system into various sections – what the modern system of medicine did 150 years ago. From the available scriptures, it is found that they have dealt with 4,448 diseases and suggested around 3 lakh (300,000) medicinal formulations.

Agasthiyar, in his book '*Garbha Soothram*', talks about the stages of growth of the child in the mother's womb, thus exhibiting his knowledge of the 'human anatomy' and 'embryology'. He has also written about various eye problems and solutions. The Ministry of AYUSH, Government of India maintains a 'Traditional Knowledge Digital Library' as a repository of all the formulations.

Diagnosis and Drugs

The Siddha system follows eight steps in the diagnosis of any disease. They are *Nadi* (pulse), tongue, colour, voice, eyes,

touch, stool and urine. The treatment in Siddha medicine is aimed at keeping the three 'Humours' viz. *Vatham*, *Pitham* and *Kapham* at the desired optimum level. The Siddha medicine system believes that diet and lifestyle together play a major role in maintaining health and in curing diseases.

There are 32 types of drugs in the form of powder, liquid, juice, etc for internal consumption. In the external therapy, they use treatment like fumigation, steaming, paste, massage, application of oil and fermentation.

They extract the ingredients from three sources viz. herbs, minerals & metals (iron, tin, mercury, copper, gold, etc.), and also animals.

Difference between Siddha and Modern Medicine (Allopathy)

According to Dr Velayudham, a well-known Siddha Doctor and a Ph.D holder in Siddha Medicine, the medicine used in Allopathic treatment, attacks the virus of the disease, but may not be able to eradicate the virus fully. But in the Siddha system, the medicine develops immunity in the body itself to fight against the virus.

"Indian medicine is a way of life. The food itself is the medicine – what you eat, the time, and the quantity of the food. Food is supplemented by yoga. Indian medicine is more preventive in nature. Allopathy does not deal with the whole system but the specific condition. Allopathy is more about reaction. Indian medicine is pro-active." Says Dr Santhosh Babu IAS, who was the Commissioner of Indian Medicine, Government of Tamil Nadu, and is a doctor in Modern Medicine. Dr Santhosh Babu wants yoga to be introduced at the elementary school level itself, to promote healthy life practices from a very young age.

"Indian medicine deals with the source of the disease and modern medicine focuses on symptoms" says Dr Anitha Balachander, a Molecular-Biologist and Director (Operations) of a leading Ayurveda drug manufacturer.

Current Status

The Siddha system of medicine comes under the Ministry of AYUSH of the Government of India. Dr Anbumani Ramadoss, Member of Parliament, started a separate AIIMS-like Institute (the renowned All India Institute for Medical Sciences, New Delhi), for Siddha called 'National Institute of Siddha' (NIS) in 2005 when he was the Union Health Minister. He also started the Central Council of Research for Siddha (CCRS) to initiate research programmes on Siddha. There are nine educational institutions offering Undergraduate (UG), Post-Graduate (PG) and Doctorate (Ph.D) courses in Siddha. The Central Government had instructed every Primary Health Centre to have at least one AYUSH wing.

Challenges

In spite of being a strong medical system, there is apprehension among the Siddha practitioners that there are vested interests who work on destroying the credibility of Indian systems of medicine. Even recently, the Indian Prime Minister Narendra Modi expressed his concern that during the pre-independence era, yoga and the Indian systems of medicine were ridiculed. Even now, attempts are being made by vested interests to destroy the faith that Indians have in the traditional medical system and treatment. The most recent occurrence of this threat was seen when the State Government promoted *Nilavembu Kashayam* to fight Dengue Fever. Several attempts were made, using celebrities, to discount the potential of Siddha medicine and dilute the faith of the people. Unfortunately, the Siddha practitioners do not have the muscle power and the money power to counter these threats and attempts. What they lack is a powerful lobby.

A misconception is being spread among the people that Indian medicines contain metals. "In the Indian system, minerals and metals are used in the permitted level. They

improve the efficacy and bioavailability of the medicine. People need not have any fear, when they take medicine as prescribed by the doctor", says Dr Anitha Balachander.

There is a general feeling among all the Siddha professionals that the curriculum in the nine government and private educational institutions offering courses in Siddha Medicine, is not being updated regularly. Books published 60 years ago are still used in these institutions for study. In the past 60 years, many new palm leaves bearing ancient knowledge about Siddha medicine, have been discovered and published and they are not updated.

Around 5000 palm leaves, bearing approximately 5 lakh (500,000) hymns, are reported to be lying in various libraries, unexplored. They may contain valuable information on the Siddha system of medicine. Although all the Siddha drugs are being used and administered successfully for centuries, its scientific validation is not available to take it to the global level.

The Government of India started an exclusive Research Council called the Central Council for Research in Siddha (CCRS) in 2005, similar to Indian Council of Medical Research (ICMR). "Presently, 30 projects are under progress. We have completed a drug called D5 for Diabetes patients and it would be released to the public after approval from the Government" says Dr R S Ramaswamy, Director General of CCRS.

National Institute of Siddha (NIS)

NIS was started in 2005 as an apex body, based in Chennai, to offer clinical services and research facilities. It has a 200-bed hospital attached to it. NIS offers PG and PhD courses in various branches of Siddha. Around 2500 patients visit the hospital daily as out-patients and to consult doctors. NIS provides treatment and medicine free for both the in-patients and the out-patients. During the visit, our Team was impressed with the cleanliness, maintenance, treatment and care in the hospital. PG and Research students gain good



exposure while dealing with the patients. The clinical data, which is generated daily, can be an excellent document for any scientific validation. We are not sure if proper data base is maintained.

Moving to the Next Level

Dr Anbumani Ramadoss (Former Union Health Minister) and Dr Santhosh Babu IAS, both agree that scientific validation is necessary, to take Siddha to the global level. The Government of India, NIS and CCRS should take initiatives to collaborate with international universities of repute. Your e-Magazine, *PreSense* has offered to actively support their efforts, through the network of the e-Magazine.

Digitising the remaining palm leaves immediately and publishing the text will facilitate in gaining more knowledge about the Siddha system of medicine. This can be done only by the Ministry of AYUSH and the State Government. "We are sitting on a gold mine, without knowing what it is", commented Dr Anbumani Ramadoss. The initiatives started by him should be aggressively pursued.

The curriculum should be updated with latest publications, to cater to modern requirements. The curriculum at present, does not provide them sufficient knowledge and insight to practise. Several students graduating from these colleges are jobless, and they are compelled to divert to the practice of allopathic medicine, for their livelihood.

The common man has faith in the Indian system of medicine. Vested interests aggressively create panic through misguided propaganda to dispel the faith. The Government should counteract the campaign and provide sufficient support to the Indian system of medicine, which is safe and without side effects. In spite of all the counter campaigns, the Tamil Nadu Government recently went ahead with the official distribution of *Nilavembu Kashayam* to protect people from Dengue Fever, as there was no alternative in Modern medicine.

The Private Sector should start Corporate hospitals in Siddha medicine, to attract the middle and upper middle class of people. Just as Kerala uses Ayurveda for 'health tourism', the Government should promote 'health tourism' through the Siddha system of medicine too. It should be promoted through herbal parks, and Siddha clinics in 'Star Hotels'. Its packaging and marketing should be a professional exercise.

Although the Siddha system deserves palatial status, unfortunately, it 'resides' in a hut. The system deserves to be promoted to its rightful position in the zenith. As Prime Minister Narendra Modi observed, the nations that leave their heritage behind, are destined to lose their identity.

**By K. Srinivasan, Managing Editor, and Dr R
Jagannathan, Editorial Advisor**

Source: October 2017 issue of Ezine PreSense

Dr Abdul Kalam on Health Care



On 15th October 2017, the nation celebrated the 86th birth anniversary of Dr APJ Abdul Kalam. As a tribute to him, I would like to republish an exclusive message recorded by me on the "Three-Dimensional Health Care Approach for Youth". This

message was recorded on 7th October 2009. We have heard Dr Kalam speaking on the topic of economics, about India Vision, etc. On our specific request that he speak about health care for youth, he gave a spontaneous four-minute message.

In this exclusive message, Dr Kalam suggested that one should spare one hour every day to maintain good health. He suggested a three-dimensional approach viz.

- (1) Fibrous vegetarian food
- (2) Physical exercise, including walking for one hour and
- (3) Meditation for 30 minutes.

He also mentioned in this message that he used to spend one hour in a daily walk, wherever he was. Till the time of his death, Dr Kalam maintained good health, and was very active.

This podcast was released in October 2009. Please listen to this informative podcast. Since this is an important healthcare-related message, please share this podcast with your contacts.

<https://youtu.be/VGKDKEWpptw>

By K. Srinivasan, Managing Editor
Source: October 2017 issue of Ezine PreSense

Walking is the Best Medicine – Benefits of Barefoot and 8-Shaped Walking

In October 2009, in an exclusive interview for PreSense, the former President of India, Dr A.P.J. Abdul Kalam suggested a three-dimensional approach for health care viz. 1) a one-hour walk, 2) fibrous vegetarian food and 3) meditation. His interview was republished in the October 2017 issue of PreSense.



The Siddha and Ayurveda systems emphasise the importance of walking. Dr D. Velayudham, a well-known Siddha practitioner and Secretary General of Indian Siddha Medical Association (ISMA) says that even 5000 years ago, *Siddhas* (ascetics) recommended a 'mild walk' (குறு நடை in Tamil) after a meal. "Though modern science may suggest any walk only on an empty stomach or two hours after a meal, I am confident that this will also be accepted in future just as many other traditional

practices of Indian medicine have been accepted by modern science, after initial reluctance and rejection", Dr Velayudham added.

Walking is a natural and automatic human function, from the time the toddler instinctively straightens himself up from all fours, to wobble his way towards steady footsteps. Walking is a way of life. However, the modern man seems to walk less than he should, with transport vehicles, elevators, escalators, walkalators and upright mobility scooters taking over the role of the human legs and feet, for mobility. What was excitement for the toddler and his family, becomes a mundane activity that modern grown-ups do less of.

According to Dr M. Arul, Chairman of the ARMA Medical Foundation, Chennai, walking can be broadly classified for two purposes viz. 1) general fitness and preventive healthcare, and 2) therapeutic purpose to address specific

problems like obesity, high blood pressure, cardiac issues, diabetes, etc. Hippocrates, the Greek physician and "Father of Medicine" seemed to know this when he said 2400 years ago, "Walking is man's best medicine".

If one intends to start walking for therapeutic reasons, one needs to consult the physician before doing so. Dr Arul adds that the benefits of physical activity depend on three elements: intensity, duration, and frequency of the exercise. A morning walk on an empty stomach will address hypertension and risks of heart attack and stroke, because walking strengthens the heart and improves cardiovascular health. It also burns fat. A minimum of 20 minutes of walk every day is essential for an average adult. Before the walk, it is advisable to visit the washroom to clear one's system, and avoid any toxin getting accumulated during the walk. It is preferable to drink sufficient water to avoid dehydration.

Dr Arul says, "Generally, the pulse rate is around 72 bpm (beats per minute) for any normal person in normal conditions. It is likely to increase during walking. The walker should walk at a comfortable pace. He should ensure that he maintains the pulse rate well below 120 bpm to avoid any problems". He also observed that the difference between natural walking and treadmill walking is that in natural walking, the body



is in motion on stationary ground, whereas on a treadmill, the ground is in motion and the body is stationed. He fears that with treadmill walking, there is the risk of the development

of arthritis in the long run.

It is preferable to walk in an open space like a park or even inside the house with proper ventilation. After a regular walk in the forward direction, 'walking backwards' for about 50-100 steps is recommended. Walking backwards, also known as 'retro-walk' helps in the use of the muscles and movements that are otherwise rarely used.

Barefoot Walking

Energy which is a vital life force, flows in the human body. In India, this energy is called '*prana*' and in China it is called '*chi*'. Death occurs when *prana* or *chi* ceases in the body. This vital energy runs through a meridian system, similar to blood vessels. The ends of these meridians are located in the feet. Barefoot walking stimulates and 'massages' these meridians and in turn, the organs, thus invigorating life's energy flow. This stimulation is especially effective if barefoot walking is done on uneven terrain because of the acupressure effect on the soles of the feet.



It was observed in a study published in the Journal of the American Geriatrics Society that senior adults who regularly walked on cobblestone terrain, displayed improved blood pressure readings when compared to those who walked on regular, flat surface. Their physical and mental health scores too showed improvement. Barefoot walking is as essential for health as the sun is for Vitamin D. Walking on cobblestones also gives the feet the opportunity to use the full set of muscles of the feet involved in walking, as they manoeuvre the uneven terrain, thus improving the health of the feet. (Diabetic patients are advised to consult their doctors before undertaking barefoot walking).

Grounding/Earthing

When the feet are placed directly on the ground or on earth, it is called



'grounding' or 'earthing'. The earth contains abundant negative charge. This electron-rich charge is believed to serve as a good source and supply of antioxidants and free-radical destroying electrons that are absorbable by the soles of the feet, from the ground. This conviction is expressed by Dr James Oschman, a doctorate in biology from the University of Pittsburgh and an expert in the field of energy medicine, based on reports found in the literature and practices of different cultures across the world. Several studies conducted till date support the concept that grounding or earthing the human body, either by barefoot contact with the ground, or by sleeping on the ground, could be as essential an element for health as sunshine, clean air and water, good food and exercise.

It is interesting to note that what we wear on our feet while walking on the ground determines whether we stay grounded or not. Rubber and plastic soles insulate our body from the earth, just as they do with electric wires. Leather-soles or barefoot on sand, grass, soil, concrete or ceramic tile, aid in being grounded and connected with the electrons of Mother Earth.

8 (Eight)-Shaped Walking

We know that in a motor driving test for issue of driving licence, the examiner expects the candidate driver to be able to manoeuvre the vehicle in an 8-shape. Driving in an 8-shape requires concentration and motor skills. The same logic applies in 8-shaped walking.

Dr A.V. Srinivasan, a well-known neurologist and President of the Indian Academy of Neurologists explains, "Ancient Siddha literature speaks about 8-shaped walking. This type of walking can help cure Arthritis, Blood pressure issues, Cardiac problems, and Diabetes, and Elevated cholesterol is brought to normal level. I call this the 'ABCDE' benefit. This type of walking also helps dyslexic children to improve concentration and motor co-ordination. These observations are based only on one's experience. Unfortunately, no

scientific research has been done on 8-shaped walking to substantiate these statements". Siddha expert, Dr D. Velayudham also agrees that ancient *Siddhas* recognised the importance of 8-shaped walking. "The twists and turns in 8-shaped walking has health benefits to people of all age groups", he says. In the Western countries, it is known as 'infinity walking'.

How to Practise 8-Shaped Walking

8-shaped walking can be practised anywhere. It can be practised in the house itself where proper ventilation is available. A space of 10 feet by 8 feet is required. Two chairs or two objects can be placed 5 feet apart, in a north-south direction. The walker starts walking from a southerly direction towards the north, beginning in the middle, between the 2 chairs and walking around the chairs in a figure-8 pattern.



A 20-30 minutes' walk at a comfortable pace provides optimum results. For a 30-minute walk, the direction of the walk should be changed after 15 minutes. For example, if one starts the walk in a south-north direction, then after 15 minutes, one should reverse the direction to a north-south direction. It is advisable not to be distracted as engaging in a personal or mobile conversation, during the walk. Siddha doctors recommend listening to soothing music or chanting of divine *mantras* for positive energy. Pregnant ladies and Cancer patients should avoid this type of walking.

According to various studies, regular walking provides 34 benefits to the human beings. Siddha experts say that 8-shaped walking gives four times more benefits than regular walking.

So, let us stay grounded and keep walking – in regular, retro and 8-shaped patterns, for wholesome health. Obviously, Charles Dickens, the great English author too knew what he was talking about when he said, "The sum of the whole is

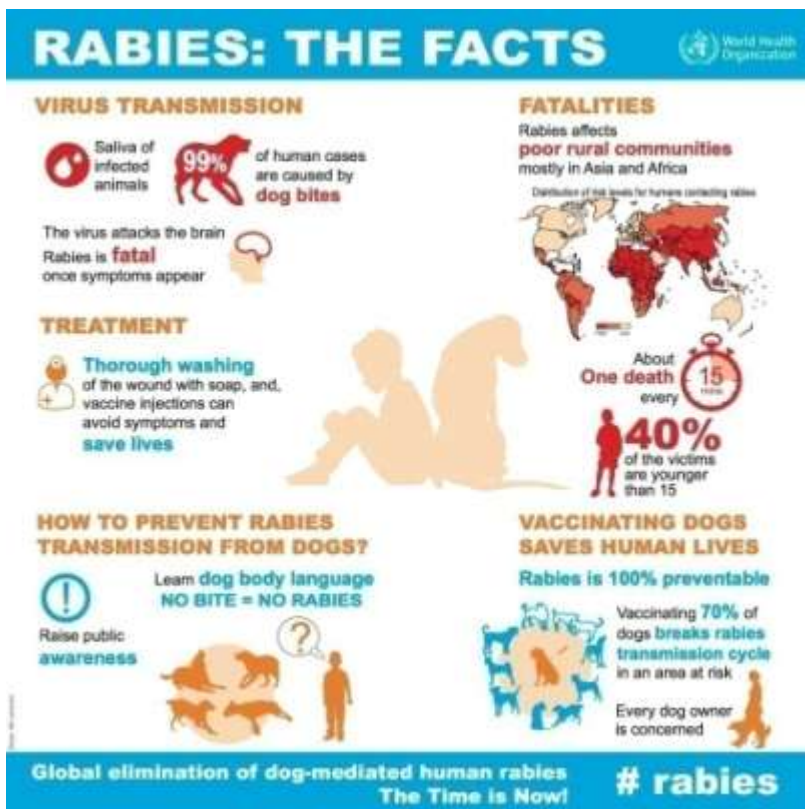
this: Walk and be happy; walk and be healthy. The best way to lengthen our days is to walk steadily and with a purpose”.

(Disclaimer: The content is not intended to be a substitute for professional medical advice, diagnosis, or treatment. It is only to create awareness about 'walking'. Readers are advised to seek the advice of their physician or any other qualified health provider, based on medical condition.)

**By K. Srinivasan, Publisher & Managing Editor, and
Susan Koshy, Editor-in-Chief**

Source : November 2017 issue of Ezine PreSense

Rabies, a 100% Fatal Disease That Is 100% Preventable



Rabies is a zoonotic disease (a disease that is transmitted from animals to humans), caused by the rabies virus. With the exception of Antarctica, rabies is endemic in all continents. Official reports from the World Health Organisation (WHO) put the global estimate of rabies deaths at 55,000 and India accounts for 36% of the deaths (about 20,000). This figure from India is also feared to be under-reported as many of the deaths are not declared as caused by rabies. This is a grave picture for India.

99% of the human rabid deaths are from dog bites. 40% of these deaths are children below 14 years of age. This is because children are weak to resist the attack due to their short stature, and also because of their curiosity with the animals, and their ignorance about the threatening consequences of bites. They therefore, do not report them to elders.

Only mammals can get rabies. Birds, fish, reptiles and amphibians do not carry or get rabies. Among the mammals, the most common carriers of rabies among the wild are bats, foxes, racoons, coyotes and skunks.

Among the domesticated animals, dogs, cats and some farm animals like the cattle are the common carriers of rabies. In India, domestic dogs are reported as the most common reservoir of the virus, with more than 95% of human deaths caused by dog-mediated rabies.

Infection, Symptoms and Diagnosis

The virus is transmitted in the saliva of rabid animals and generally enters the body in the virus-laden saliva from a rabid animal into a wound such as a bite or a scratch or by direct exposure of the mucosal surface (lining of a body opening like the nose, mouth, etc) to the saliva from an infected animal (during licking). The virus cannot infiltrate intact skin.

The incubation period for rabies is normally 2-8 weeks but can go up to a few years, depending on factors such as the location of virus entry and viral load (concentration of the virus). The initial symptoms of rabies include fever with pain and unusual or unexplained tingling, pricking, or burning sensation (paraesthesia) at the wound site.

Once the virus reaches the brain, it further replicates, resulting in the manifestation of clinical signs in the patient. As the virus spreads to the central nervous system,

progressive and fatal inflammation of the brain and spinal cord develops and death is certain within 10-14 days.

There are two forms of the disease:

- *Furious rabies* exhibits signs of hyperactivity, excitable behaviour, hydrophobia (fear of water) and sometimes aerophobia (fear of fresh air). Death occurs in a few days due to cardio-respiratory arrest.
- *Paralytic rabies* accounts for about 30% of the total number of human cases. This form of rabies runs a less dramatic and usually longer course than the furious form. Muscles gradually become paralysed, starting at the site of the bite or scratch. A coma develops, and eventually death occurs. The paralytic form of rabies is often misdiagnosed as a neurological infection as encephalitis or meningitis, contributing to under-reporting of the disease.

Unfortunately, the current diagnostic tools available are not equipped for detecting the rabies infection before the onset of the clinical disease and the rabies-specific symptoms of hydrophobia or aerophobia are presented.

By then, it would be too late to treat the disease as it has then become 100% fatal. But the silver lining in this morbid series of bad news is that this dreaded disease is 100% preventable.

Treatment

The World Health Organisation (WHO) has classified 'animal contact' into three categories and recommended the corresponding Post Exposure (bite) Prophylaxis (treatment) or PEP for the treatment.

<u>Category</u>	<u>PEP</u>
I – touching or feeding animals; licks on intact skin.	None.
II – nibbling of uncovered skin; minor scratches or abrasions without bleeding.	Immediate vaccination and local treatment of the wound.
III – single or multiple transdermal bites or scratches, licks on broken skin; contamination of mucous membrane with saliva from licks; contacts with bats.	Immediate vaccination and administration of rabies immunoglobulin. Local treatment of wound.

All category II and III exposures are assessed as carrying the risk of developing rabies and requiring PEP. This risk is increased if:

- the biting mammal is a known rabies reservoir or vector species.
- the exposure occurs in a geographical area where rabies is still prevalent.
- the animal looks sick or displays abnormal behaviour.
- a wound or mucous membrane was contaminated by the saliva from the animal.
- the bite was unprovoked.
- the animal has not been vaccinated.

Prevention

September 28 is annually observed as World Rabies Day, and the Association of Prevention & Control of Rabies in India (APCRI) is actively involved in creating awareness about rabies through health education propaganda of its prevention, treatment and vaccination.

And finally, the following tips are useful in preventing rabies and keeping the threat at bay:

- Vaccinate all dogs and cats against rabies regularly as specified by law.
- Keep the pet dogs under control from the risk of stray and wild animals.
- Leave stray and wild animals alone.
- Do not keep wild animals as pets.
- Keep your property clear of wild animals.
- Do not touch, feed or adopt wild or stray animals.

By Susan Koshy, Editor in Chief

with input from Dr J. Balasubramanian, Retired Professor of Paediatrics, Government Medical Service, Tamil Nadu, and Life Member of Association for Prevention and Control of Rabies in India (APCRI). He is actively involved with various organisations interested in prevention of rabies.

Source: Feb 2018 issue of PreSense

Pranayama Helps Reduce Stress and Improves Health

On 21st June 2019, the whole world celebrated 5th International Yoga Day. Yoga is the greatest gift given to the world by India thousands of years ago. Nobody is able to find out the origin of Yoga techniques, as it goes as far back as the Vedas, where it is mentioned too. Lord Krishna in his Bhagwad Gita talks about '*Ashtanga Yoga*'.

Pranayama is the advanced stage in Yoga Practice after Asana. According to Patanjali, compiler of Yoga Sutras in Sanskrit 5000 years ago, Pranayama is the retention of *prana*, a bioplasmic energy. Pranayama is the cessation of the movement of inhalation and exhalation of air through the nostrils. Patanjali wrote 196 Yoga Sutras covering *Ashtanga* (8 steps) *Yoga* like *Yama*, *Niyama*, *Asana*, *Pranayama*, *Prathyahara*, *Dharana*, *Dhayana* and *Samadhi*.

Around the same time, Thirumoolar wrote 3000 hymns in Tamil elaborating the same *Ashtanga Yoga*. According to Thirumoolar, any person practising '*Kumbaka*' (retention of breath) can increase the longevity of healthy life. Lord Krishna in Bhagwad Gita talks about the importance of Pranayama (Sloka 4.29).



Pranayama – Definition

Yoga experts give two types of definitions. Prana means life energy. Prana + Yama = control of breath (Inhalation of breath – Purak, holding of breath – Kumbak, and exhalation of breath – Rechak) – to improve physical and mental health.

Prana + ayama = Dimensions of breath (breathing with awareness and passing it through Nadis in human body to activate chakras) to experience a spiritual journey.

Concept of the Human Body

Modern Science divides the human body into various systems like respiratory system, urinary system, circulatory system, nerve system, etc. Each system is divided into organs, tissues, cells. When there is a problem, modern medicine starts diagnosing the respective system to cells.

According to Yogis, the human body has 5 sheaths (layers) viz. Annamaya Kosha (Food Sheath), Pranamaya Kosha (Vital Sheath), Manonmaya Kosha (Mental Sheath), Vijnanamaya Kosha (Intellectual Sheath), and Anandamaya Kosha (Bliss Sheath). Through Pranayama, these layers are activated to increase the inner potential of the person, which remains dormant always.

According to modern science, the lungs of an average human being has the capacity to hold 5 litres of air. But in practice, people not practising breathing exercises use less than 8% (less than 400 ml). People who practise breathing techniques like Pranayama, swimming, etc can go upto 30% (1500 ml). Holding the breath will help to increase the oxygen absorption by the body, which maintains good health of the body cells.

Some Benefits of Pranayama

- Improves blood circulation and cardiac vascular function.
- Increases red blood cells.
- Increases lung capacity providing solution for respiratory disorder
- Stimulates various enzymes needed for digestion
- Reduces stress level and keeps blood pressure normal
- Controls Type 2 Diabetes

- Acts as bridge/connector between body and mind.

An average person breathes 15 to 18 times per minute. Reducing the breaths per minute improves the longevity of life and health. Through Pranayama, the breath rate can be reduced.

Simple Exercise

Readers can adopt the following basic steps and experience Pranayama.

Take a brisk walk for 10 minutes

Sit with spine erect, in a comfortable posture on a mat (either on the floor or on a chair) in a ventilated place. Keep your hands in Chin Mudra (touch the tip of thumb with tip of the index finger with palms facing upward as in the picture).



Keep your eyes closed

Observe the flow of breath for one minute – Observe the movement of abdomen during inhalation and exhalation.

Start with exhalation (both nostrils) for 3 seconds

Inhale for 3 seconds through both nostrils

Exhale for 3 seconds through both nostrils.

Continue this practice for 5 minutes for a week and increase to 10 minutes in the next week. You can slowly increase upto 20 minutes.

While coming out of your practice, do not open your eyes suddenly. Rub your palms and keep them on your eyes,

without touching the eye balls, for 10 seconds. Then slowly open your eyes.

Once you are comfortable with this exercise, increase the count from 3 seconds to 5 seconds. After achieving the '5-second inhale and 5-second exhale' for 20 minutes comfortably, go to a competent Yoga teacher for the advanced level of Pranayama.

If you have any chronic health problems, consult your doctor before starting your practice of Pranayama.

by K. Srinivasan, Publisher and Managing Editor,
(With input from Yoga Shikshak Shri Suresh Veera)
Source : June 2019 issue of PreSense

We Are What We Eat –

How Food Affects Our Actions and Behaviour

In the recent years, due to changes in the life style and food habits of our people, especially the youth, the society is facing major health issues. Those health issues which used to affect people after the age of 55 years, are affecting even youngsters in their twenties these days.

In this regard, what modern science explores in research today was explained in detail by Lord Krishna in the Bhagawad Gita (Chapter 17, Slokas 2 to 10) over 5000 years ago. The food we consume affects not just our health but also our behaviour and responses too.

In the Bhagawad Gita, Lord Krishna defines three types of food *viz. Sattvic* (mode of goodness), *Rajasic* (mode of passion) and *Tamasic* (mode of ignorance). These three types of food influence the mood of the person differently.

Sattvic Food

Bhagwad Gita Sloka 17.8:

आयुःसत्त्वबलारोग्यसुखप्रीतिविवर्धनाः ।

रस्याः स्निग्धाः स्थिराहृद्याआहाराः सात्विकप्रियाः ॥ ८ ॥

(Meaning: *Persons in the mode of goodness prefer foods that promote the life span, and increase virtue, resilience, health, happiness and contentment. Such foods are juicy, succulent, nourishing, and naturally tasteful*).

Naturally available fruits, nuts, vegetables, pulses, cereals, grains like rice/wheat, green tea (fresh leaves), natural juices, Idly, plain *roti* and fish are *Sattvic* foods. This type of food is suitable for those who work using their brains, *viz.* intellectuals like IT professionals, teachers, researchers, scientists, and so on.

The word *Sattvic* is derived from the Sanskrit word *Sattva* which means pure, essence, nature, vital, energetic, clean, conscious, strong, courage, true, honest, wise, rudiment of life. *Sattvic* diet emphasises food and eating habits which promote, maintain or restore a sattvic style of living.

Rajasic Food

Bhagwad Gita Sloka 17.9:

कटुम्ललवणात्युष्णतीक्ष्णरूक्षविदाहिनः ।
आहाराराजसस्येष्टादुःखशोकामयप्रदाः ॥ ९ ॥

(Meaning: *Foods that are too bitter, too sour, salty, very hot, pungent, dry, and spicy are dear to those persons in the mode of passion. Such foods produce pain, grief, and disease.*)

Rajasic food is consumed for good taste. Vegetables consumed as spicy food, fast food, masala-added foods, Dosa, stuffed chapattis, soups, non-vegetarian items like red meat, egg, black tea and coffee come under this category. This type of foods increases muscle strength. *Rajasic* food is suitable for people engaged in outdoor sports and games, the army, police professionals and those who use physical strength in their work.

Tamasic food

Bhagwad Gita Sloka 17.10:

यातयामंगतरसंपूतिपर्युषितंचयत् ।
उच्छिष्टमपिचामेधंभोजनंतामसप्रियम् ॥ १० ॥

(Meaning: *Foods that are overcooked, stale, putrid, polluted, and impure are dear to those persons in the mode of ignorance.*)

Rajasic foods are those that are consumed after 6 hours of cooking, as well as reheated food, beverages like cold coffee, artificial juices, junk food, cakes and biscuits. This type of foods reduces the coordination of the mind with the body.

Such food should be avoided in order to maintain good health and a sound mind.

What Human Beings Need

pure, light, sweet positive energy flow	spicy, over-stimulating, creates restless, excited mind	dull, heavy, blocks flow of prana, creates toxins
sattva	rajas	tamas
Foods that promotes purity of mind, peace, intelligence and right decisions	Foods that give us motivation. Food that keeps us attached to the ego and creates desires.	Foods that destroy our resistance to disease. Clouds the mind. Promotes negative emotions.
MILK	COFFEE/ BLACK TEA	RED MEAT
HERBAL TEA	CHICKEN	ALCOHOL
GHEE	EGGS	FAST FOOD
GRAINS	ONION/GARLIC	FRIED FOOD
FRESH SWEET FRUITS	DARK LENTILS	FROZEN FOOD
FRESH VEGGIES	CITRUS FRUITS	CANNED/STALE FOOD
HONEY	VERY SPICY FOODS	REFINED SUGARS
NUTS	CHOCOLATE	TOBACCO
MUNG BEANS	SALT	SODA
*PEACE WHILE EATING	*EATING TOO FAST	*OVEREATING

(Image Courtesy: www.heymonicab.com)

Human beings require a diet that is a combination of *Sattvic* and *Rajasic* foods in a balanced proportion. The proportion depends on the nature of the job the person undertakes. It is similar to adorning jewellery crafted with a balanced blend of pure gold and copper. For example, a person engaged in a job where he uses intelligence like the IT industry, research, teaching, etc., should have a diet consisting 80% *Sattvic* food and 20% *Rajasic* food. Scientists should have a diet of around 90% *Sattvic* food to achieve excellence. People like Dr Abdul Kalam, Albert Einstein and Bernard Shaw used to have a diet that contained more than 90% *Sattvic* food and

they have achieved excellence in their respective areas of work. It is reported that Adolf Hitler had a diet that was more than 90% *Sattvic* food.

People working in the police, the army and those working towards great physical strength require about 60% *Sattvic* and 40% *Rajasic* food. Ancient kings used to have a diet of this proportion to maintain their valour.

It is suggested that to maintain a balanced mind and body, a minimum of 50% of one's diet should be *Sattvic* food. If the intake of *Rajasic* food increases (more than 60% of the diet), it could negatively affect one's mental balance. They may become very emotional. It is believed that if a majority of people in a society consumes a diet that is predominantly *Rajasic*, it could affect their emotional balance, threatening a law and order issue in that society.

Youngsters of upto about 25 years of age are generally more engaged in physical activities. These youngsters therefore need high nutrition. *Sattvic* food is highly nutritional. If they consume more of *Sattvic* food, such a diet will help them over the following 50 years of their lives to maintain good energy levels, strength (stamina) and intelligence.

Tamasic food is to be generally taken only for medicinal purposes under the guidance of doctors. When the portion of *Tamasic* food is increased, drowsiness occurs, adversely affecting the coordination of the motor senses with the brain. For example, when a person consumes excessive alcohol, he loses his balance and the quality of work suffers.

pH level is a measurement of the acidic/alkaline ratio in the body. The ideal pH ratio is 80% of alkaline and 20% of acid, which ensures good health. *Sattvic* food is more than 80% alkaline which protects the immune system and makes it stronger. The recovery rate of patients taking *Sattvic* food is faster than that of people who consume *Rajasic* and *Tamasic* food. People suffering from hypertension and constipation can improve their condition by including more *Sattvic* food in their food habit.

Interesting Facts about Animals

Interestingly, this kind of food habit is applicable even to animals. Herbivorous animals (animals that eat herbs) have a long digestive system like human beings. Animals like the cow, goat, elephant, sheep, buffalo and horse eat only vegetarian food. They live without attacking other animals and human beings and are helpful in preservation of the environment. They belong to the *Sattvic* category of food consumers.



Human beings fall under the herbivorous category due to the anatomy of their body. However, human beings consume all three types of food, viz. *Sattvic*, *Rajasic* and *Tamasic*.

Animals like the cheetah, the lion, the tiger and certain breed of dogs (known as the carnivorous category) eat the flesh of 'herbivorous' animals. These animals have a very short digestive system, so that the digested particles get eliminated from the digestive system quickly. These animals are aggressive in nature.

Carnivorous animals have short bowels to allow minimal transit time for the unstable and dead animal food which putrefies and decays fast. On the contrary, humans have longer digestive tracts for the slow digestion and better absorption of plant food. The stomach of carnivores is more acidic than that of human beings, and this enables them to digest raw meat. Animals like the fox, and birds like the crow and the vulture (omnivorous category) eat dead animals and leftover foods. They are not aggressive, but they attack from behind.

Conclusion

The nation has to develop not only economically. It needs to promote healthy people. Progress in technology and advanced life style have changed our food habits but not for the better. We should therefore be conscious about what we consume and develop healthy eating habits because our behaviour, attitude and thinking are affected by the kind of food we eat. Healthy people make a healthy society and a healthy nation.

by K. Srinivasan, Publisher and Managing Editor

(Information input: courtesy Shri Suresh Veera, Yoga Expert)

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