

A tribute to an honest Irrigation Engineer with the indomitable spirit of universal compassion

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I pay tribute with a deep sense of respect to my mentor, philosopher and guide Er.T.Hanumantha Rao (1930-2017) who attained Mahasamadhi on 08/1/2017. He was an honest Irrigation Engineer with intense compassion and enthusiasm for ever excellence in effectiveness and efficiency at unconscious competence level till his last breath at eighty six years of age. I know him for the last three decades from 1987. In 1987, when I was undergoing ten month long term course in Irrigation water management in Water and Land Management Training and Research Institute (WALAMTARI) as Assistant Executive Engineer of Andhra Pradesh Irrigation and Command Area Development Department; he was then Director General of the rank of Engineer-in-Chief for WALAMTARI. He visited Gokaraju Rangaraju Institute of Engineering and Technology as Chief Guest on the occasion of United Nations World Water Day on March 22, 2016. His inspiring speech motivated everyone. He released a message which is at the end of this article.

MY FIRST INTERACTION

During my training in the year 1987, I underwent training in YOGA in Gandhi Gyan Mandir at Koti in Hyderabad. It had a profound effect of transformation on my personality development. The philosopher inside me came out and he encouraged me to bring out a booklet "Know yourself series". His message below dated 2/1/1988 to this booklet shows his power of mentorship.

"Mr.Mohd.Hussain, Long term course trainee officer has made a commendable effort in bringing out the booklet "Know yourself Series". He has taken considerable pains in collecting the voluminous data on

moral values, culture, yoga, Geetha etc. I am sure that this booklet will be of immense value to the officer trainees to know various human aspects, behavioural trends, moral upliftment etc. Mr. Mohd. Hussain deserves all compliments for the excellent effort in bringing out this booklet”.

He helped me to get transferred to WALAMTARI as faculty member. I got opportunity to work as trainer in the training programmes of USAID and Worldbank, including the opportunity to update my academic scholarship.

HIS HABITS, CHARACTER AND VALUES

He used to wake up at 3.30 AM everyday with daily practice of Yogasanas and pranayama. We find in him all seven habits of Dr. Stephen R. Covey in his famous book “The seven habits of highly effective people”. He had Child-like curiosity (JIJNASA in sanskrit) to know and understand not only technical aspects, but also all other scientific aspects like Astronomy, Genetic Engineering, Nuclear Science, Psychology, Geology, Physics, Chemistry, Sociology, Political science, Economics, other branches of Engineering etc. He was an **ALL ROUNDER** with thoroughness in all fundamentals of engineering and science. His method of study was to write with his own hand-writing and then review it frequently. He showed me many such written books. His sensation was complete and perception without self-serving biases. Many of us are not creative because of our sensory dominance (usually visual dominance over other four senses i.e. touch, sound, taste, smell) and brain dominance (usually left brain dominance over right brain dominance). Perhaps his yoga practice had given him opportunity to develop all traditional senses of sound, touch, vision, Taste and Smell & other vestibular, proprioception and time senses during the process of OBSERVATION. We find in him the harmony of both left brain and right brain activities. He was a Whole brain thinker. He was a patient, empathic and intuitive listener with deeper and deeper rate of All Multisensory intuitive convergence and integration. He was also music lover which he admitted during an interview of engineering college students in the year 2005. He was fond of western instrumental music Beethoven Symphony and Tyagaraja Keertanas. He was good swimmer. He was General Captain during his graduate study in Kakinada Engineering College and played basketball, cricket, table tennis, hockey and swimming.

National Board of Accreditation (NBA) defines twelve characteristics of an engineer as programme outcomes. Surprisingly, we find in him all those twelve characteristics. His love of profession reflected in all of his various works, has confirmed the truth of Khalil Gibran’s saying that **WORK IS LOVE MADE VISIBLE**.

He was a voracious reader, keen manual recorder and prolific writer. He wrote many articles on current issues of water management in all leading newspapers. He was an effective communicator. He loved Telugu literature and he learned the SANSKRIT language by attending a residential course. During his speech on the occasion of United Nations World Water Day 2016 at Gokaraju Rangaraju Institute of Engineering and Technology (GRIET), he explained to the students, the word to word meaning of GAYATRI Mantra.

His frequent message I heard during his speeches as Director General of WALAMTARI was this: “Let us together learn new things starting from the ZERO. The trouble is when one understands wrongly and negatively. His attitude has to be first changed from negative to zero and then build up.”

He had explained to me many times with deep sense of passion the “Standard model of Particle Physics” , “Standard model of Big Bang Cosmology”, latest status on exploration research of Cosmos using telescopes & satellites and research on gravitational waves.

Holy Gita (Chapter 18: Verse 46) defines the process of attainment of perfection. **“He from whom all beings arise and by whom all this is pervaded; by worshipping him through the performance of his own duty, does man attain perfection (siddhi)”** (Translation by Dr.S.Radhakrishnan).Sri T.Hanumatha Rao attained such perfection.

His keen observation was as per the wisdom of Jiddu Krishnamurthy, United Nations Peace medal awardee , **“The ultimate answer is to see things as they are, unclouded by the deceptions of self-concern”**.

HIS POSITIONS HELD

He was an able administrator with deep insight and far foresight. He was former Director General (Engineer-in-chief rank), Water and Land Management Training and Research Institute (WALAMTARI), a training Institute of Irrigation and Command Area Development Department, Government of Andhra Pradesh. He was former Chief Engineer, Telugu Ganga Project (Major Irrigation) and Chief Engineer , Minor Irrigation of Government of Andhra Pradesh. He was the Chairman of the Institution of Engineers (India), Andhra Pradesh Centre during 1988-90.He also worked as Commissioner of Tenders, Government of Andhra Pradesh. He was former Chairman, Technical Committee ,Water Conservation Mission ,Government of Andhra Pradesh.

HIS CONTRIBUTIONS

Er.T.Hanumantha Rao has published 92 technical papers in Indian and International journals .He published four books:

1. Type designs for Lift Irrigation Schemes in India
2. Type designs and Ready Reckoner Tables for Earthen dams
3. Manual on Designs for Minor Irrigation Projects
4. Innovative Participatory Technology for Watersheds-Low Cost structures on “Four Waters Concept”.

As Chief Engineer , Minor Irrigation he coordinated to bring out a book on “Guidelines for Preparation of Project Reports for Surface Water Minor irrigation Works” for which Dr.N.T.Rama Rao who was Chief Minister then had appreciated him in his foreword in the following words:

“Mr.T.Hanumantha Rao , Chief Engineer , Minor Irrigation has done innovative work in standardisation of designs, preparation of ready reckoner tables and issuing guidelines in the shape of a manual for preparation of detailed project reports for minor irrigation works. I appreciate this pioneering activity in the sphere of minor irrigation”.

As Director General of WALAMTARI , he made it mandatory to do “Diagnostic Analysis of Irrigation Systems” in irrigation projects for all officer-trainees of WALAMTARI. As a trainee officer, I also prepared Diagnostic Analysis Report of Irrigation System of Sriramsagar Project.

After superannuation from the State Government Service, he worked for over two decades as Technical Team Leader /Consultant for the following nine international organizations in 22 countries. During visits

abroad, he has solved several varied problems related to Water Resources Engineering and Civil Engineering for the ongoing projects in these countries

-The World Bank

-United Nations (Operation Project Services)

-IFAD (International Fund for Agricultural Development) ROME (partly UN funded)

-CIRDAP (Centre for Integrated Rural Development for 15 Asian and Pacific Countries)

-WAPCOS International Assignments

-German Agro Action, Germany

-DFID (Department for International Development), Government of UK

-Swedish Project Development

-(Kingdom of)The Netherlands Government

He gave inaugural addresses in many of national and international conferences. He delivered the 27th Dr.A.N.Khosla Memorial Lecture during 29th Indian Engineering Congress organised by The Institution of Engineers (India) (December 18-21, 2014) on “**Making Rivers Live and Interlinking Rivers –A new Concept**”. He proposed the technology of constructing a series of barrages on rivers to make them live and interlinking of rivers possible. He also applied for patent of this technology.

He described the following major advantages by this technology:

- Hydro power generation at each barrage
- Inland water navigation, through the navigation locks at barrages.
- Development of inland fisheries with fish ladder provided at each barrage.
- Ensuring environmental flows from start to sea end of the river facilitating growth of wetland mangroves.
- Increase in ground water recharge in the entire basin and each sub basin and prevention of sea water intrusion into ground water in coastal areas.
- Interlinking of the live rivers through inland water navigational canals, which also would supply water for drinking and industrial purposes.
- Development of industries by the sides of navigational routes in the river and interlinking canals.
- Tourism development and aquatic sports.

His **FOUR WATERS CONCEPT** is being implemented successfully in watershed managements of Rajasthan .Many politicians of all political parties , ministers ,bureaucrats and engineers of all states used to seek his advice by meeting him at his residence. He sent his solution to the conflict of Mullaperiyar dam to both Governments of Tamilnadu and Kerala. He studied the water resources systems of other countries and tried to implement in our country to suit our needs, educating all stakeholders concerned.

He gave inaugural address on “Sustainable Technologies in Civil Engineering “ in the year 2011 for the national seminar on “Sustainable Technologies in Civil Engineering: Perspectives and Strategies(STEPS-2011)” at Gokaraju Rangaraju Institute of Engineering and Technology (GRIET),Hyderabad. We can find his speeches on You Tube and his literature on GOOGLE.

HIS AWARDS AND RECOGNITIONS

He was awarded “Best All Rounder Cup” for proficiency both in sports and studies during his graduate study in Kakinada Engineering College.

He was recipient of Central Board of Irrigation and Power (Government of India) Award 1989 for outstanding work in Water Resources in India. He got Bharat Ratna Sir Mokashagundam Visvesvaraya Award in 1987 for outstanding contribution in the field of Engineering, jointly instituted by The Institution of Engineers (India) and Government of Andhra Pradesh. He was recipient of **VISISHTA SEVA PATRAM**, the highest honour of Andhra Pradesh State Government in 1986 for outstanding work in Government Service.

HIS MESSAGE RELEASED ON UNITED NATIONS WORLD WATER DAY ON MARCH 22, 2016 AT GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY(GRIET),HYDERABAD

Let us together earnestly strive to develop and conserve quality and quantity of water, both waste water and fresh water; by implementation of the principles of Green building, Virtual water , Hydraulic structures, Water footprint , Rainwater harvesting, Groundwater Recharge and Recycling by Wastewater Treatment to prevent water borne diseases and water conflicts.

Let us together continuously update our attitude towards water using **L.O.V.E.S. Mutual Cooperation Quotient** among nations, states, communities and individuals.

L: Listening attentively and intuitively, both verbally and nonverbally, without selective listening and preconceived judgments due to the sensory dominance and brain dominance.

O: Observing with all senses without selective perception due to accumulative errors of Sensory Information Gathering and Sensory Information Processing

V: Verifying Intentions (honest or dishonest), Communication, Masks people wear to hide trueself. Misperceptions, Psychological games from NOT-OK position, Negative thinking patterns, Performance Appraisal Errors, Social Context and Values (both eternal and temporal) of oneself and others.

E: Empathising with others as everyone has unique mindset, unique emotional set and unique bodyset.

S: Self-awareness accurate expansion by appropriate self-disclosure of feelings and Receiving functional feedback (simultaneously rejecting biased and unjust dysfunctional feedback) from events, situations and people.

May the soul of this modern BHAGEERADHA rest in eternal peace!

May his indomitable spirit of universal compassion beyond borders guide all the stakeholders of water management towards water wisdom all over the world towards sustainable development and peace!



Dr .J.N.Murthy , Principal and Dr. Mohd.Hussain, HOD, Dept. Of Civil Engg., honouring Er. T.Hanumantha Rao with a memento of Macro and Micro Cosmic Rhythm and Law, both temporal (at the levels of cellular life, atomic matter and galaxies of stars) and eternal; represented by the divine cosmic dance .

Cosmic dance is the dance of dynamic universe of energy of $E= mC^2$. It indicates the Unity of all things and Beyond the world of opposites. More than Ninety Nine percent of visible matter is in the fourth state of matter i.e plasma. More than Ninety six percent of matter is invisible and unknown dark matter and dark energy, beyond the visible light wavelength of 400 nanometres to 700 nanometres.

This 2 metre statue was presented by Govt. Of India in 2004 to CERN (The European Centre for Research in Particle Physics in Geneva)

References : The famous book : The Tao of Physics by Fritjof Capra

Wikipedia on Nataraja



A statue of Shiva engaging in the Nataraja dance at [CERN](#) in Geneva, Switzerland

Deep ecological awareness is Spiritual awareness . Ecological awareness in that deep sense recognises the fundamental interdependence of all phenomena and the embeddedness of individuals and societies in the cyclical processes of nature- Fritjof Capra.



Dr.J.N.Murthy ,Principal presenting a plant to Er.T.Hanumatha Rao for creation of Sustainable Soil–Water-Plant Relationship Revolution all over the globe.



Er.T.Hanumantha Rao presented certificates and prizes to students who won competitions of Group discussions , elocution , quiz, essay writing ,Audio Comprehension ,PPT presentations on the theme of United Nations World Water Day 2016 “ Water and Jobs”.



Er.T.Hanumantha Rao releasing the message on the occasion of United Nations World Water Day 2016