

# A creative library scientist

## *A centenary tribute to Shiyali Ramamrita Ranganathan*

*The growth of unfoldment of personality is under three forces: hereditary or biological force, environmental and ecological force; and a third—not easily granted but well known in traditions not obliterated by anti-occult European drive of the last few centuries—psycheo-genetic force*

Ranganathan

The year 1992 is the birth centenary of S. R. Ranganathan. He was born on 9 August 1892. His sheer hard work and dedication earned him the unique honour of National Research Professorship in Library Science, by the Government of India in 1965. It is rare that such recognition comes to library scientists in any country.

Ranganathan was born in Shiyali in Tamil Nadu. He majored in mathematics from the University of Madras in 1916. He obtained a teaching Diploma L T from the Teachers' College, Madras. He began his career as a teacher in mathematics and ultimately became an Assistant Professor in the Presidency College, Madras. But some sudden turn of events due to his friends and well wishers took him to the post of University Librarian of the University of Madras in 1924.

This opened up a new chapter in the annals of librarianship in India. A scientific and scholarly outlook began to emerge. Ranganathan began to investigate the library management and practices. It led on to a new school of thought. The concept of five laws of library science, colon classification, general theory of classification, catalogue, cataloguing, theory of cataloguing, reference service, bibliography, documentation and information studies became a founding force to generate library organization and service. Emergence of documentation periodicals and their use and finally team research in library and information science began to flourish. He also designed and developed educational programmes in library science. Librametry as a measurement and quantitative approach took shape during this

period. In short, he provided a holistic and synthetic basis to library and information service.

To Ranganathan, a scientific contribution or an intellectual record of knowledge is a valuable piece which had to reach its right user for developing it into a social utility. He said, "Quick and effective application of knowledge, both as a step from which further advance can be made and for efficient industrial and social development depends largely upon its being properly assembled and on the provision of efficient tools for search". (Ranganathan: Classification and Communication 1950).

Throughout his life since 1924, Ranganathan developed a variety of tools and techniques, systems and insti-



tutions, professional personnel to handle inner thought contents of documents in such a way that it reached the right users. He developed 'facet analysis' as a method of coextensively representing the knowledge-seeking approach of enquirers in the organization of and access to documents—macro-representation for broad chunk of knowledge and micro-representation for narrow structure of knowledge. He developed a well-modulated hierarchical structure of knowledge representation. This provided a base for guided search adaptable to the enquirers' intellectual volition—a guide to learning. This contribution of Ranganathan led him to be regarded as the all-time great in library science. His mathematical abilities and practical

sense led him to develop a *magnum opus* called the *Prolegomena to Library Classification* (edition 1, 1937; edition 2, 1957; and edition 3, 1967).

He developed a scientific method called 'spiral of scientific method' in which he identified a never-ending cycle of investigation operative from different types of cognitive skills, namely observation leading to facts, intellectual reduction to empirical principles, intuitive sublimation to fundamental laws, intellectual deduction to deduced principles. The beginnings to the next cycle emerge from the non-conformity to deduced principles and to prevailing fundamental laws. This results in new observation, principles, etc. He identified modes of formation for subject development, namely fission, lamination, loose assemblage, aggregation, cluster, fusion, and distillation as a development pattern of subjects. These modes coexist in thought formation of subject and move towards cohesive modelling of universe of subjects. Avid observer that Ranganathan was, he keenly followed the psychology of the users and the knowledge pattern and arrangement in tune with searchers' needs. At any time of search an enquirer browses through an alien, penumbral, umbral, penumbral, alien-chain of subjects according to Ranganathan,—an APUPA pattern.

A prolific reader and writer, Ranganathan strived to express his thoughts precisely and lucidly. His Colon Classification was often praised for its elegant intellectual structure. But severe criticisms were levelled against the scheme for its notational complexity. Again and again he was urged to simplify it, but his reply was always a truly scientific one that there were two problems, a difficult one and a relatively easy one. The first was to create an instrument for the accurate analysis of knowledge and its re-synthesis in a linear sequence. The second was to simplify the resultant sequence in a set of symbols, a notation which was simple and obvious. He took the first task, secure in the thought that sooner or later mankind would solve



the second problem. To attempt both problems simultaneously would be to fall between tools. Perhaps he thought one day he would find time to move on to the second. Yet he proved right. For the computer is now with us, and is capable of providing necessary solution to the notational problem. The matching of analysis and summation of thought contents of documents to that of the seekers, is the essence. The notation or the computer-communication has to achieve that.

His achievements are summarized as follows— He designed the colon classification (1925), he formulated the five laws of library science (1928), he designed the classified catalogue (1934), he was involved in the Scientific Management of Libraries (1934), he designed chain indexing (1938), he designed facet analysis (1950), he founded *Annals of Library Science* (1954), the Sarada Ranganathan Chair for Library Science, University of Madras (1957) and the Sarada Ranganathan Endowment for Library Science (1961). He developed the dynamic theory of library classification (1963), was Editor of *Library science with a slant to documentation* (1964) and was National Research Professor in library science (1965).

His list of honours and awards is equally impressive. He was awarded Rao Sahib, Government of India (1935), D. Litt (Honouris Causa), Delhi University, New Delhi (1948), Honorary Fellowship, Virginia Bibliographic Society (1951). He was Patron, Delhi Library Association (1954), Honorary Member, Indian Association of Special Libraries and Information Centres (1956); he won the Padmashree, Government of India, (1957); was made Honorary Vice-President, Library Association (London) and Honorary Fellow, International Federation for Documentation (FID). Two volumes of Ranganathan Festschrift were produced in 1964. He was awarded D Litt (Honouris Causa), University of Pittsburgh, Pittsburgh (1964), National Research Professorship in Library Science (Govt. of India) (1965), Honorary Fellowship, Indian Standards Institution (1967), Margaret Mann Award (American Library Association) (1970) and Ground

Knight of Peace. (Mark Twain Society, USA) in 1971).

Ranganathan wrote extensively scientific biographies on many scientists. He was a regular contributor to *Current Science* on this subject. He wrote a definitive biography on the mathematical prodigy 'Srinivasa Ramanujan'. He had an encyclopaedic knowledge and approach to many subjects. Teaching was a passion for Ranganathan. He never followed a textbook approach. He made his students think from the fundamentals and picked up the basic logic and reasoning to move step by step. He once just picked up a proposition with me. It was whether an oil lamp was cheaper in consumption than an electric lamp. I said that it was 'electric lamp' that was cheaper per lumens. But he said that it was not the right preference and he asked me to systematically find out lumens an ordinary oil lamp gave and that of an electric lamp. A study in energy consumption patterns in 1961! After hard-boiled calculations both of us agreed that the cost per lumens in electric power was less from that of kerosene or another oil lamp. But Ranganathan said that we do not need the lumens of an incandescent lamp; we waste a lot of it. Further the electric lamp was controlled by a corporate power, which may sometimes be disorganized. The oil lamp or candle light was controlled by us. It is soothing to the eye. The eyes' sharpness gets steadily lost in the brightness of the electric lamp. Well, I felt that it was not right. Look at now where we are; with power cuts, the voltage fluctuations and the relative value of transferring or use of electric power generating to more valuable assets—goods and services. I sometimes get back to Ranganathan's lumens. He was for parsimony—necessary and sufficient, but not extravagant.

Ranganathan knew the value of simple living. We wonder at his managerial simplicity and control. When he founded the Documentation Research and Training Centre at Bangalore, he was seventy years old. The magnanimous P. C. Mahalanobis, who was the founder of Indian Statistical Institute under whose umbrella DRTC was set

up, felt that creature comforts are necessary for any intellectual to bring out his best, offered him chauffeur-driven cars, furnished bungalows, a decent honorarium, servants for the house, besides the intellectual set-up of an institution at Bangalore. To his surprise, Ranganathan refused politely all these comforts and requested the generous patron to set up a small institution in a modest rented building near his own rented house and provide for research students so that he could pursue his intellectual endeavours. Mahalanobis agreed to this request.

But we young colleagues of Ranganathan felt that he had let go an opportunity for building facilities in DRTC. When we said this to Ranganathan he said: "Boys you don't know what you are saying. If you have cars, yes public eye will be on you. Jealousy will begin. Every one of us will be thinking—Where is the car going? Who is going in the car? Where are the drivers idling their time? How much is the petrol used? How much pilferaged? How often does the car go to repair? and so on. Instead of library science, all our minds, including mine, will be on the car. So, I refused". We felt the austere concentration of Ranganathan on library science. He bestowed all his attention on the subject. No Sundays, no holidays. All days are working days, all hours are working hours and working minutes. The binary of zero and one for every second you work and rest within a second. Thus, began an incessant and ardent search for roots and routes for dissemination of knowledge to the right user. Simplicity, austerity, creativity, work, living, humanity and charity, were synthesized in Ranganathan, a creative library scientist. He died on 27 September 1972, after 80 years of sustained life for human progress in India.

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