INDOLOGICA TAURINENSIA

THE JOURNAL OF THE
INTERNATIONAL ASSOCIATION OF SANSKRIT STUDIES

VOLUME XXXIX

2013

EDIZIONI AIT

Publisher: Comitato AIT, corso Trento 13 – 10129 Torino (Italy)
Email: irmapiovano@cesmeo.it; info@cesmeo.it
Printer: Edizioni ETS, Pisa (Italy)
Annual Subscription (1 issue): € 30,00
Electronic version: www.indologica.com
Sole Agents: Comitato AIT

Autorizzazione del Tribunale di Torino N. 4703 del 21/7/1994
I.S.N.N. 1023-3881

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KAPIL KUMAR BHATTACHARYYA

SCIENCE COMMUNICATION IN THE INDIAN PERSPECTIVE: INSIGHTS FROM THE INDIAN EXPERIENCE[1]

Introduction

Two-thirds of the Indian population still lives in the villages far removed from the desirable amenities of life. While science has indeed made progress by leaps and bounds over the centuries, the fruits of science are still far from being tasted by the common masses, one of the primary reasons behind it being that a huge chunk of them still remain sceptical to the marvels of 'science'. However, it ought to be borne in mind that the essence of science lies in attaining the objective of the betterment of human beings. Therefore, the importance of science lies not in what it has been able to achieve in ideal testing conditions but in how far it has been able to be of use in reality to the common masses for whom it exists. For this though, science has to be brought within the reach of the common people and this can only be done through effective communication. Effective communication refers to that communication that seeks rather to empower the masses than merely to inform them. That should be the approach of science

[1] The author has chosen to insert relevant quotations by individuals and authorities in his work instead of trying to express the ideas in his own words, whenever he has felt that the quotations suit the occasion to a T.

The author would like to thank Dr. Biplab Loha Choudhury for generously sharing his work and allowing the author to use extracts from the same for this present work. Without his help, this work certainly would have been incomprehensive.

communicators. This paper is a small endeavour within the limited time-frame to broach on the subject of science communication in the Indian perspective drawing upon illustrations from a documentary analysis of a field based research project and historical details from medieval India.

Keeping in mind the social and economic structure of the Indian society, Wilbur Schramm once said: *"Activity at the village level is the only means, I would say, of effective village change and whereas communication has to travel down, it has got to travel up and, much more important it has got to travel round at the village level. People have to work together and discuss together. Only when communication can build itself into the social structure, it is going to show any real hope of extensive results. Only when media channels can mix with inter-personal channels, and with the organization in the village are you going to have the kind of development that you will like. In other words, the idea of big media, of talk- down communication, is something, which is not going to work."*[2] This was a marked shift from his earlier ideas where he had emphasized that media could act as magical agents of change.

Schramm's idea of communication also holds true for science communication efforts in the Indian perspective. It is worth mentioning here that whenever we talk of science communication practices in any country, we have to remember that such practices are bound to vary from nation to nation based on the social, cultural and traditional history of the nation concerned. Science, after all, is ingrained in the very way of human living and, hence, finds practical application only in the human perspective through social and cultural practices as exercised by human beings in accordance with their environment.

[2] Choudhury, Biplab Loha (2009). "Sustainable Rural Development: An Indian Experiment Utilizing Indigenous Knowledge System and Communication". Published in Debabrata Dasgupta Edited *"Indigenous Knowledge Systems and Common People's Rights", Agrobios India in 2009 ISBN No. (10): 81-7754-396-2 (13): 978-81-7754-396-4.*

Approaching Science Communication In The Indian Perspective

The Sanskrit word for 'Science' is *'Vijñāna'*. The word *'Vijñāna'* is a combined word (*sanjukta sabda*) comprising of the prefix *'Vi'* that connotes to *'Vishesh'* meaning 'Extra-ordinary' and the suffix *'Jñāna'* meaning 'Knowledge'. Thus, science (*vishesh jñāna*) refers to 'Extra-ordinary knowledge', knowledge of the universe and of the elements comprising it in the light of reasoning and purpose. However, this *vishesh jñāna* exists for the betterment of the living condition of *sādhāran* (ordinary/ common) people and hence it cannot be limited to *vishesh* (extra-ordinary) people. Thus, science has to be brought within the reach and understanding of the common masses through the process of knowledge sharing. It is not that these *vishesh* people (scientists) do not want to share this *vishesh jñāna* with *sādhāran* (ordinary/ common) people.

But then, how to perform this onerous task has been a subject of challenge for science communicators for ages. The Indian approach to communication known as *sādhāranikarana*, along with its event-based action strategy offers a solution. Several of our rituals (folk-religious events of periodicity or Bratas) arose out of such need as has been demonstrated in Assam University Rural Communication Project (AURCP[3]) Action Phase (1998-2001).[4]

The Project made extensive use of 'Indigenous knowledge system (IKS) expressed in villagers' work practices, rituals, beliefs, entertainment and religious forms of folk media, interpersonal communication ways, and their interaction with nature and neighbouring communities'. The project aimed at building a development communication model *from within communities* which would also effect economy in the cost of

[3] Assam University Rural Communication Project (AURCP) refers to a project that was undertaken from 1998 to 2001 in three villages in one of the farthest corners of the North-Eastern state of Assam in India. The project was planned to test communication- integration and communication sustainability aspects and their impact on development of the villages.

[4] Ahmed M, Choudhury B.L. (2003), *Impact Sustainability Study of Agriculture in Nayabil*, AURCP, Assam, 2003.

development. Its perspective was based on Sadharanikaran, the basic principles which Sage Bharata pronounced in his communication treatise Natya Shastra more than two thousand years ago. Indian folk media and classical media have integrated its basic tenets over hundreds of generations in their community specific forms as well as common expressions. Instruments were created for applying tenets of Sadharanikaran in communication group sessions and exchanges of interpersonal and triadic nature, and to test common orientation of village organization members with other villagers. Such creations drew content heavily from IKS of the three villages. [5]

The Sadharanikaran perspective from the Natya Shastra was preferred over the Western perspective owing to certain advantages. The Sadharanikaran perspective from the Natya Shastra stresses on Sampriti (bonhomie) between the communicator and the communicatee so that no alienation takes place between them. For the same, the communicator must be a Swahridaya with the communicatee, i.e. (s)he should feel intensely for them as fellow brethren. The communicator should be an information superior with the urge to share the same with the communicatee. Asymmetric position of the communicator helps understanding how the messages should be developed to reach the communicatee. Sadharanikaran leads to arousal of right emotion which effects sharing and participatory interest in communicatees. Here the communicator is not merely a person or group commissioned for campaign, but the person who is emotionally jelled with the community. The basic to development is the right ethics and the urge to work for community welfare. Sadharanikaran perspective is compatible with this goal.[6]

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[5] Choudhury, Biplab Loha (2009). "Sustainable Rural Development: An Indian Experiment Utilizing Indigenous Knowledge System and Communication". Published in Debabrata Dasgupta Edited *"Indigenous Knowledge Systems and Common People's Rights", Agrobios India in 2009 ISBN No. (10): 81-7754-396-2 (13): 978-81-7754-396-4.*

[6] Choudhury, Biplab Loha (2009). "Sustainable Rural Development: An Indian Experiment Utilizing Indigenous Knowledge System and Communication". Published in Debabrata Dasgupta Edited *"Indigenous Knowledge Systems and Common People's Rights", Agrobios India in 2009 ISBN No. (10): 81-7754-396-2 (13): 978-81-7754-396-4.*

The uniqueness of the AURCP lay in the effective usage of the Indigenous Knowledge System (IKS) of India for realizing the goals of communication. One such initiative was the experiment with the ritual of Bipadnashini[7] Brata. Bipadnashini Brata is a great creation of community wisdom of old time. Its perpetuation shows its relevance. During AURCP action phase, its importance was tried to be understood. On the date of the ritual (brata), the women offer puja to deity Bipadnashini. They offer 9 or 11 fruits to the deity which are taken as prasad by family members. Every family has to keep plants of fruits for this occasion. Sharing of fruits among families is also resorted too. Dr. B.P. Nath, Medical Officer of Barjalinga Public Health Centre enlightened us (the communicators) on few reproductive facts, which can be associated with the observation of this brata. According to him, most of the pregnancies occurred during November to January. It means pregnant women require huge dose of nutrition within next 3 to 5 months to ensure that the development and organogenesis in embryo take place properly. It also requires that women are taken care of during this period. They require iron and other minerals in good quantity during this period. The fruits available for 3 to 4 months during this period such as mango and jackfruit are rich in minerals. If every village home has such fruits available, reproductive and child health is bound to improve.[8] Many such experiments on IKS were tested by the AURCP that yielded fruitful results.

Based on the successful experiments of the AURCP, we may safely assert that in order to effectively communicate with the ordinary masses, extra-ordinary people devise many events and process-based techniques with which they are comfortable, showing many of our traditional practices. For that though, they have to first analyse the thought process of the ordinary masses, orient their mind and heart accordingly in sync with the mind

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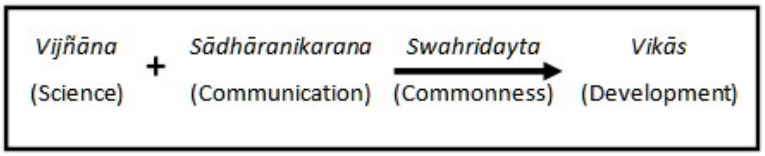
[7] Bipadnashini refers to a Hindu Goddess who is considered to the 'eliminator of dangers', 'Bipod' meaning 'danger' and 'nashini' meaning 'eliminator'.

[8] Choudhury, Biplab Loha (2009). "Sustainable Rural Development: An Indian Experiment Utilizing Indigenous Knowledge System and Communication". Published in Debabrata Dasgupta Edited *"Indigenous Knowledge Systems and Common People's Rights", Agrobios India in 2009 ISBN No. (10): 81-7754-396-2 (13): 978-81-7754-396-4.*

and heart of the ordinary people and thereafter formulate the strategies. That is the essence of *sādhāranikarana*, 'establishing commonness (*swahridayta*) among the participants of a communication process through the process of simplification'. Once they are able to do so, they are likely to enjoy the fruits of effective communication that shall ultimately culminate in *Vikās* (Development).



Sādhāranikarana: The Indian Approach to Communication

The Indian approach to communication is known as *sādhāranikarana.* It is worth mentioning here that the root word of sādhāranikarana, that is, 'sādhāran' does not have any one definite synonym in English and connotes to both the words 'simple/ ordinary' and 'common' found in the English language. Thus, sādhāranikarana refers to 'establishing commonness among the participants of a communication process through the process of simplification'. It must be remembered here that communication is not the means to an end. It is an end in itself. The primary and ultimate objective of communication is to achieve a sense of commonness. Once a communicator achieves that, the other things are likely to fall into place. This sense of commonness is known as *swahridayta*.

The concept *sahridayata* comes from the word *sahridaya*. Whereas the former refers to a quality, characteristic, or state of being or becoming, the latter names a person of that faculty. Thus, a *sahridaya* is one who has attained *sahridayata*. According to Vidya Niwas Misra (2008, p. 97), the word *sahridaya* has two components: *saman* (same, equal, harmony, being) and *hridaya* (heart, becoming). He draws on the following Rigvedic sutra to clarify its meaning: "*Samani va*

aakutih saman hrydayanivah saman mastu somano yatha vah susahasatih," that is, "let our minds be in harmony, our hearts be in harmony, let our thinking be in harmony, our thought processes be in harmony so that we can live for a meaningful living of all-together" (ibid.).... Sahridayas have "common sympathetic heart" (Yadava, 1998, p. 188). In other words, a *sahridaya* is a "person in state of emotional intensity, i.e. a quality of emotional dimension coequal to that of the sender of the message of communicator" (Kundra, n.d., p. 200). In such background, *sahridayata* can be considered as "social preparedness" that "entails living amongst people, sharing their joys and sorrows but encompassing the entire humanity within, becoming a citizen of a world" (2008, p. 93). (Adhikary, 2010)

The present author prefers the term *'swahridaya'* over '*sahridaya'* in accordance with the original Sanskrit word as given in the Gajendra-Moksha Stotram in the Srimad Bhagavata Mahapurana (Skandha 8, Adhyay 3, Verse 18): *ātmātma-jāpta-gṛha-vitta-janeṣu saktair; duṣprāpaṇāya guṇa-saṅga-vivarjitāya; muktātmabhiḥ sva-hṛdaye paribhāvitāya; jñānātmane bhagavate nama īśvarāya* (VedaBase Network). The word *'swahridaya'* is a combination of two words, *'sva/ swa'* meaning 'with' and '*hridaya*' meaning 'heart'. *Swahridaya* refers to a person who has reached a state of mental acumen where he/ she can experience the same mental state as experienced by his/ her audience/ the other participants in the act of communication within his/her own heart and which stays with his/ her heart forever, thereby, enabling him/ her to communicate accordingly with his/ her fellow-beings.

The essence of *swahridayta* lies in achieving a commonness of perspectives and objectives through dialogue, bearing in mind the needs, aspirations and inhibitions of all the participants involved in the communication process. This aspect of establishing commonness with the masses is one that is of paramount importance in the perspective of science communication, but more often than not, undermined and neglected by the science communicators and the authorities alike. Thus, *swahridayta* is a mandatory pre-requisite for effective science communication for the communicators. Here, I

would like to draw inferences from a folkloristic text in the Indian perspective that further addresses the concern of *swahridayta* and the importance of *swahridayta* in science communication.

Sometime in the medieval India lived a woman of extra-ordinary powers of prediction on nature and general way of living. Her name was Khanā. Not much is known clearly about her origin[9] and the timeline of her existence. However, we do know that she was the daughter-in-law of the legendary Indian astronomer and astrologer Varāhamihira who wrote the seminal book on astronomy entitled Pañcasiddhāntikā. We also know that Varāhamihira lived from 505 AD to 587 AD. Historically speaking, it is believed that Khanā died before Varāhamihira. If that is so, we may safely assume that Khanā lived in the 6th century AD. However, that is not our current subject of discussion.

What is important is that Khanā supposedly had extra-ordinary powers of accurately asserting the cause and outcome relationship of natural occurrences and her assertions on such relationships acted as guidelines for the rural masses in their daily practices. Interestingly enough, her assertions (Khanār Bachan) continue to act as guidelines for the rural folk even today. Since she lived at a time when agriculture was the chief occupation of people, her assertions are primarily related to agricultural practices. However, her assertions were not solely limited to the direct agricultural practices. Many of her assertions acted as comments on general way of better living. For instance, Khanā asserts at one point:

"Khanā bole hāl niye māthe jobe koribey gomon
Āgey dekho chāshi bhāi jeno hoy subhokhon
Subhokhon dekhe sodā koribey jātra
Pothe jeno na hoy oshubho bārta."

[9] While the folk-lore of Khanā has generally been associated with Bengal, both West Bengal and East Bengal (now in Bangladesh), references to Khanā have also been reportedly traced to other Indian states such as Assam, Bihar, Orissa and Tripura and even neighbouring countries such as Nepal and Sri Lanka.

The lines roughly translated to English mean: *"Thus says Khanā that before going out for farming, a farmer should ensure that it is the auspicious moment for leaving the home as per Hindu astronomical calculations. Only when it is the auspicious moment, he should leave for his work. Besides, while going to work, he must not lend his ears to any inauspicious talk."* Now, this statement is only a fair assertion of the fact that a farmer must be in the right frame of the mind and full of positivity, thanks to his faith in the stars, while going for his work. Scientifically speaking too, a farmer or for that matter any professional needs to be in the right frame of mind while going to his work-place to give his best shot there.

What is even more interesting is the fact that her assertions were given mostly in rhymes, a pattern that finds considerable appeal and retention value among human beings unlike monotonous prosaic sermons. Till date, her poems, mostly in rhymed couplets are a favourite among the rural folks. The fact that the messages were designed in rhymed couplets also facilitated the smooth transfer of the messages from generation to generation through the oral tradition. This is particularly significant because we do not have much written accord as far as the poems of Khanā are concerned. Most of it has come down to us through the oral tradition which would certainly have been difficult had the messages been passed in prosaic form. Some of Khanā's assertions related to agriculture and their English translations have been given below:

Khanā's Assertion[10]	English Translation
Māthe giye āge koro dik nirupon; *Purbo dik hotey koro hāl chālon.* *Jā kichu āsha purbey sokol;* *Nahi sonsoy, hobe sofol.*	Upon going to the field, a farmer must ascertain the directions and start ploughing from the East direction. If a farmer does so, all his wishes will be filled. Khanā assures farmers that they need not be doubtful about their success this way.

[10] The assertions have been compiled from a little known book *'Prachin O Bishhudha Khanar Bachan'* written by Basab Bijoy Das and published by Sajal Pustakalaya, Kolkata. The details of its year of publication, however, remain unknown. (Bachan in Bengali, means, words/ assertions).

Khanā's Assertion[10]	English Translation
Purnimā-amāboshyay je dhore hāl; *Tar dhukhkho hoy chirokāl.*	A farmer who starts ploughing on either Purnimā (full-moon-day) or Amābashyā (new-moon-day) always remains unhappy.
Diney rod, rāte jol; *Din din bāre dhāner fol.* *Diney jol, rāte tāra;* *Se bochor dukkher dhāra.*	If crops get sunlight at day and water at night, they grow rapidly. However, if a year witnesses water (rains) at day and stars at nights, the year shall surely be miserable.
Pānch robi māshe pāy; *Jhorāye kinba khorāye jāy.*	A month that has five Sundays is accompanied by excessive rains or no rains at all.
Jebār gutipāt sāgar tireytey; *Sarbadā mangal hoy kahey jyotishetey.* *Nana saishye paripurna vasundharā hoy;* *Khanā bole Mihir ke nāhi sansoy.*	A year that witnesses a lot of sea-shells accumulated in the sea beaches is invariably going to be good for all. Such a year will also witness a rich harvest of various crops. Thus says Khanā to Mihir (her husband).
Pān putley shrāvaney; *Kheye na furāy Rāvaney.*	If betel plants are sown in the month of Shrāvana[11], the yield will be such that even the ten-headed Rāvana won't be able to finish it.
Nodir dhāre putley kochu; *Kochu hoy teen hāt uchu.* *Kochu boney chhorāle chhai;* *Khanā boley tar sankhya nāi.*	If you sow Taro (corms and tubers) in a riverside, the crops would grow up to be healthy. Similarly, if a farmer sprays ash over a Taro plantation, it will result in remarkable harvest.
Āmey dhān; *Tetuley bān.*	A good crop of mangoes is always followed by a good crop of grains while a good crop of tamarind is always followed by floods.
Nārikel gāchhe nun mātee; *Shighra shighra bāndhe gutee.*	A farmer must add adequate salt to the soil where he grows coconuts. This will result in fast growth of the coconut trees.
Dhorley pokā dibey chhāi; *Er cheye ar upāy nāi.* *Māti shukāley dhālbe jol;* *Sokol māshei pābe fol.*	If the crops are affected by insects, a farmer must spray ash over them. Similarly, if the soil becomes dry, it must be watered. If these steps are followed, a farmer shall always enjoy the reward of good harvest.
Paschimey dhanu nityo khorā; *Purbetey dhanu bharshe bhorā.*	If a rainbow is sighted in the West, it means an approaching drought. But if a rainbow is sighted in the East, it means plentiful rains in the days ahead.

[11] The month of Shrāvana, according to the Hindu calendar year, usually begins in late July and ends in August.

Khanā's Assertion[10]	English Translation
Bochorer prothom ishāne boy; *Hobei bharshā Khanā dekey koy.* *Byang dākey ghana ghana;* *Shighra bristi hobe jāno.*	Thus says Khanā that if the wind blows from the North-East (Ishān Kon) direction in the beginning of the year, it means certain rains. Similarly, when frogs croak incessantly, it means rains are imminent.

Whether or not Khanā had extra-ordinary divine powers or her assertions were purely based on minute observations of nature and living and how far her assertions hold validity in today's context or are universal in nature are subjects of discussion that shall surely be pursued by researchers in the years to come. But of one thing, we can surely assert with conviction. Khanā was a great communicator. She was a *swahridayta* of the rural masses and knew exactly how to successfully convey the necessary messages to the people. She knew very well the language that the rural folk would understand and more importantly listen to in rapt attention and retain in their minds. Therefore, she took the unconventional path of propagating the messages in rhymes instead of the conventional approach of prosaic discourse. I am here reminded of a few words by Pandit Jawaharlal Nehru, the first Prime Minister of independent India, *"If anybody is going to sermonize, I am not going to listen to that sermon. You must do it in an entertaining manner."* Khanā, as a communicator, knew exactly the difference between a sermon and a delight. No wonder then, her expressions continue to find appeal among the rural people till date and to an extent still influence their daily lives.

While the history of Indian civilisation has been blessed with the presence of some of the greatest scientific minds of all times such as Āryabhatta, Kanād, Varāhamihira, Nāgārjuna, Susruta, Charaka, Patanjali and so on who contributed significantly to the propagation of science, unfortunately, these names are limited mostly to academic endeavours. On the other hand, Khanā remains perhaps the only one of her kind whose ideas on nature and living found considerable appeal among the common masses. It was her unconventional yet effective mode of communication that was facilitated by *swahridayta* that made her one of the earliest known science communicators and perhaps the most effective of them all.

The *Swahridaya Mat Aadaan Pradaan* (SMAP) Model of Communication

Based on the above assertions, it may be safely assumed that the concept of *swahridayta* is of paramount importance to science communication. It is worth mentioning here that the masses remain the fulcrum of all science communication endeavours. Thus, such initiatives are likely to fail if they do not get favourable response from the masses themselves. One of the significant problems in the development perspective is the Dog's Tail Syndrome. Dog's Tail Syndrome is the term coined by Dr. Biplab Loha Choudhury to *"express the qualitative state of Indian peoples' development vis-a-vis development efforts of the country"*. It is *"a condition in which so much may be the effort, once the force (here the money and the key-implementers from outside the community) is withdrawn, entire effect almost vanishes".*[12] Thus, science communication ought to focus simultaneously on preventing the Dog's Tail Syndrome and ensure that earlier efforts are not laid to waste.

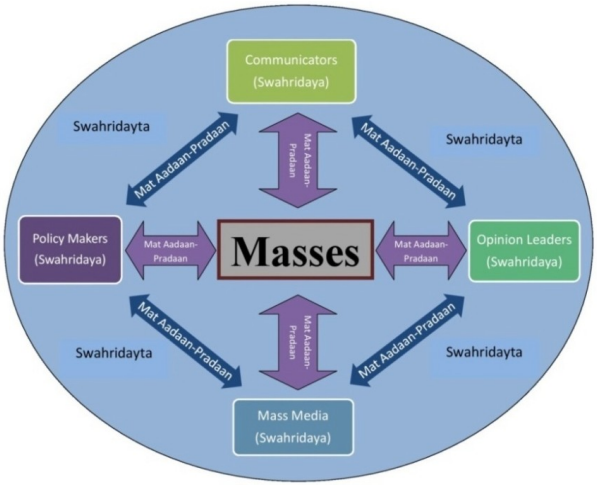
In this regard, a new model for communication in lines of the concept of *swahridayta* may prove effective in realising the long-standing goals of science communication across India and the globe that have remained unattained till date, especially in the developing countries. This model can, in fact, be extended to almost any development communication initiative. In the public service set-up, almost all development communication efforts for the masses hinge upon four development agents:[13]

1. The Communicators, generally the experts in the concerned field;
2. The Opinion Leaders who play a vital role in formulating public opinion;

[12] Dr. B. L. Choudhury (2011). *Indian Paradigms of Development: Man Standard and Communication.* Kolkata: Sampark, 2011. Page 25.

[13] Bhattacharyya, K. K. (2013). "Science Communication As A Tool For Development". *Global Media Journal – Indian Edition*, Summer Issue, June 2013, ISSN NO. 2249-5835, Page 13.

3. The Mass Media/ Press that keeps an eye on everybody and keeps the masses informed;
4. The Policy –Makers who make decisions in the best interest of the state.



Swahridaya Mat Aadaan Pradaan (SMAP) Model of Communication

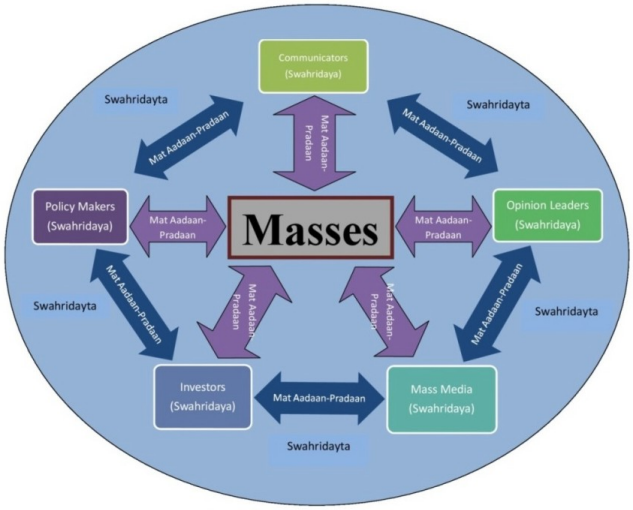
This model may be called the *Swahridaya Mat Aadaan Pradaan* (SMAP) Model of Communication[14]. The model acknowledges the role and importance of all the four development agents indispensable to the cause of attaining the development goals of a country for the masses through the process of communication. More importantly, the

[14] The model has been improvised from the earlier model of development communication given by K. K. Bhattacharyya entitled 'Quadruple Model of Development Communication' as it was felt the earlier model needed to be upgraded and interpreted in the Indian perspective to give it a comprehensive meaning and practical approach. (Bhattacharyya, K. K. (2013). "Science Communication As A Tool For Development". *Global Media Journal – Indian Edition*, Summer Issue, June 2013, ISSN No. 2249-5835, Page 14).

model recognises the importance of interaction and consultation both within the development agents and between the development agents and the masses directly in any development endeavour. The model positions the masses at the fulcrum of all development communication efforts and empowers them with a relationship of direct and two-way communication to and from the development agents.

According to this model, all the four development agents, i.e., the Communicators, the Opinion Leaders, the Mass Media/ Press, and the Policy –Makers need to first become *swahridayas* so that they may have a common orientation and objective towards attaining the development goals. Unless *swahridayta* is inculcated among them, there cannot be sustained development communication. Once *swahridayta* is attained by them they will express their *mat* (idea/ opinion) freely in an interactive manner of *aadaan-pradaan* (exchange). This *aadaan-pradaan* will ultimately lead to *sammati* (state of agreement) among them and thus make them *sahmats* (people on an agreeable note). Once they become *sahmats,* they will complement each other without fear or hesitation and effectively contribute to the process of development communication, thus, culminating in becoming *sahyogis* (contributors). This will ultimately lead to *sampriti* (bonhomie).

The model may be further extended to the incorporation of another agent, the investors/ the businessmen/ the industrialists as the investors play an important role in the formulation and implementation of development communication initiatives in the private sector domain. Thus, the *Swahridaya Mat Aadaan Pradaan* (SMAP) Model of Communication may also have an extended and upgraded version. This model, in my opinion, shall be equally effective in context of the efforts of science communication in today's scenario.



Swahridaya Mat Aadaan Pradaan (SMAP) Extended Model of Communication

Concluding Remarks

With the changing times, the role of science practitioners has also changed significantly. They can no longer afford to limit themselves to the responsibility of scientific indulgence only. Science practitioners have the crucial task of ensuring that the benefits of modern science and technology reach the people for whom they are actually meant. For this though, they will have to come out of their shell and freely mix with people and formulate strategies for science communication accordingly. As discussed earlier, science propagation does not necessarily need to be at the cost of neglecting our Indigenous Knowledge System (IKS). Our indigenous knowledge still has a lot to offer to the world despite the numerous inventions and discoveries that are taking place every now and then. Human beings, being guided by customs and traditions, often find it hard to shake off their traditional practices at the cost of modern innovations. Therefore, efforts ought to be made towards the possible merger

of our traditional knowledge and modern innovations if and whenever possible.

Most important of all, science communicators have to imbibe in themselves the spirit of *swahridayta* to effectively communicate with the common people. Once they do so, they will go a long way towards becoming modern day Khanās which is the pressing need of the hour. At the end of the day, only a fine blending of desired knowledge and proper communication of the same can improve the living standards of people and thereby empower the society. The Indian approach to communication takes into account the working mechanism of the human mind pertaining to both the communicators and the communicatees alike that gives way to respective desirable actions and results and thus posits before us an alternative school of thought that seeks to effectively realise the fruits of science communication in the human perspective.

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