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Opinion

Critical Science Should Leave White Lab Coat to Enter Public Court as PopSci

Tapas Goswami*

Former Scientist Emeritus (ICAR, India) Presently Institute of Veterinary Science and Animal Husbandry, Siksha and Anusandhan (Deemed to be University), Bhubaneswar, India

***Corresponding Author:** Tapas Goswami, Former Scientist Emeritus (ICAR, India) Presently Institute of Veterinary Science and Animal Husbandry, Siksha and Anusandhan (Deemed to be University), Bhubaneswar, India.

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Abstract

Very often scientific community fail to recall their responsibility to explain the work generated from their lab table to public level. Every citizen has a right to know what is the outcome of scientific research continuing in their country and how it is beneficial for their day-to-day life. To eliminate adverse gap between scientist and public, the scientific information should not be polarised rather to be popularized. PopSci is acronym of science popularization invariably used in scientific journal. Lay man never understands science language, similarly they never expect too much precession in scientific data presentation. Preferably people like to get the big picture published in their language without much detail. So, popularization of science is our collective responsibility, not yours not mine.

Keywords: Knowledge; Popular Science; Public; Society; Science

Introduction

With progress of science our society must know what is the advancement in science and how much it is beneficial for them. The common man should receive right kind of information about the consequences of public fund invested in scientific program. Findings of scientific research originated from working bench may be positive or negative that should be presented with complete picture during dissemination of science for public. Trust in science is must, on the reverse side the world is increasingly threatened by misinformation that is jeopardizing trust in science [1]. We have observed a harmful gap in communication between white lab coat wearing scientist and public; why so? Mostly scientific community very often overlooked their responsibility in explaining their work to people, that restricts scientific progress [2]. Scientific data generated are mostly published in peer reviewed scientific journals of high repute those are never been read by common man, nor these journals are intended for common people. Popularisation of science is one type of science broadcasting system or targeted distribution of scientific information, generated from science table to public level. So, diffusion of scientific information in society is also the responsibility of scientist. Unlike scientists and reviewers, lay man never expects too much precession in the scientific data presentation. General public preferably like to get the big picture in their everyday language without aberration.

Necessity of science for society

Obviously, question may arise why to write science for the public that does not pay any incentive nor escalate their professional

carrier. Simply it is the social responsibility of scientist to do so. Science writers get pleasure to disseminate scientific treasure. How it is beneficial for society? Due to popularization of science, public will be aware of recent development in science by which informative public can add pressure on democratic government to make better policy decision for town planning, education, food safety, environmental management, communication systems, to improve public services, and much more [3]. Science writing is intended to keep the populace to be informed about the progress of science, its trends, its directions, and its practical utility narrated in native language so that it will be attractive but not sensational. In USA the translation of scientific news is so vast that reduction of information in miniature form has been taken care to publish in a systemic manner for the easy understanding of their citizens. In this regard several organisations like National Academy of Science, American Association for the Advancement of Science, National Research Council are dedicatedly involved for popularization of science [4]. In several occasion good science remains unseen by most of the world when inventors are reluctant to find a path to get it out beyond scientific community. We must keep in our mind that public never use scientific terminology in their everyday language so targeting the non-scientific reader it is always healthier to dismantle the critical terminology to bring ease to the receivers. Ideally writing science should display accurate information in comprehensive language with carry home message. All the relevant observations extracted from scientific report should be placed prominently in the manuscript so that scientific advisor to government may pick up a few for policy decision but nowhere directive should be given to government to implement those findings. In democracy once Churchill said that "scientist should be on tap not on top", it means that in democracy science should not be ignored but not necessarily scientists view will be taken care [3]. Have we ever found graduates' students of biological stream of any Indian universities have ever been taught or guided how to be an efficient science writer, how to display science for lay man. Any of our universities has never thought to incorporates science writing curriculum at graduation level so that students after obtaining higher degree in science can prefer to accept science journalist as their profession. Surprisingly Woods Hole Oceanographic Institution, Massachusetts (USA) is offering a course with course title "How Not to Write for Peer-Reviewed Journals: Talking to Everybody Else." In true sense this type of curriculum may not add any incentives to scientist but some extent it may reduce the disincentive to participate in outreach [5]. These curriculums may be considered as absurd and irrelevant not of any use in scientific carrier for Indian students, as we perceive. People who are not experts prefer to read popular science therefore presently several scientific issues like climate change, stem cell research, cancer, obesity, insomnia, drug addiction, human evolution, pollution are gradually entering non-scientific journal, and now migrating from school compound to parliament ground [5]. Many a times worldwide general citizen is receiving erroneous and distorted information of science by certain groups who are keen to misguide the people, bright example is vaccine denial during corona pandemic. During Global Polio Eradication Program denial group from Pakistan spread wrong information that oral polio vaccine may cause infertility among vaccine recipient [6,7]. Bachi Karkaria a well-known Indian journalist and columnist for Times of India, once reported that "proliferating University of Wikipedia and Dr. WhatsApp is responsible to spread misinformed refusal for vaccine that put others at risk" [8]. Due to social media, we are unintentionally receiving erroneous information about science. We are misguided by the social media and it has negative impact in our life. This is not only for India even in USA there is too many climates change denial groups those groups are highly vocal to motivate the mass in wrong direction. Due to interference of vaccine denial group routine childhood vaccination programme in USA was 10 years record low, therefore to eliminate misinformation we need better and more PopSci by the scientific fraternity [9]. The word PopSci is a highly attractive acronym for popular science. While writing for PopSci the content should be exciting but logical to people who are not science experts".

Need to read

Since 1845 Scientific American one of the science magazines is continuously publishing articles in science, health, technology, and environment for the general citizens [10]. As of now the Scientific American has published more than 200 articles contributed by Nobel Prize-winners. In real sense Scientific American is one of the high standard magazines sharing trustworthy knowledge, enhancing our understanding of the world, and advancing social justice [10]. However Scientific American is not an open access magazine and due to high subscription fee, it is not widely available for public of resource poor countries like India. Scientific American

is mostly confined to the library of high-ranking Universities in our country. In India few science journals are also publishing scientific information in English as well as in Hindi language so that it can be accessible to vast majority of people those who are not comfortable with English language. The CSIR-NIScPR (Council of Scientific Industrial Research-National Institute of Science Communication and Policy Research), New Delhi under government of India is regularly publishing scientific information in English and Hindi language in the name of Science Reporter and Bigyan Pragati respectively. Similarly, Vigyan Prasar is an autonomous organization under the Department of Science and Technology (DST), Government of India is publishing science newsletter DREAM both in English and Hindi version in a regular manner. Unlike Science Reporter and Bigyan Pragati, the DREAM is an open assess magazine. Anyone can read and gather knowledge in various aspect of science without prior subscription.

The Indian Science News Association established in 1935 with an objective to disseminate science news and culture for public understanding; publishing a journal "Science and Culture" from its inception. In this race Indian Science Congress Association is also publishing a science magazine in the name of Everyman`s Science, however the magazine is not regularly publishing and website lacking relevant information, so unable to attract science loving intellectual mass. Besides government of India several state governments of India are also publishing science magazine either in English or in their local languages to popularise science in regional basis. In one of the editorials of science magazine DREAM a thought-provoking editorial has been published with a title "Science Popularisation: Whose Cup of Tea is it". It has conveyed that science movement can be achieved by participation of people. The participants joined in a training programme for Master Resource Person to disseminate science for public has suggested that "If we want to popularize science, we must bring out resource material in all Indian languages not in Hindi and English for free distribution" The central theme of the editorial has given a message that "Science popularization will then be our cup of tea – not just yours or mine" [11].

Conclusion

Science is not a subject for polarization instead all attempts to be made for its popularization. Scientific knowledge is intended to develop every aspect of citizen`s life. Through popularization of science, we must motivate the people to think scientifically and act scientifically. Therefore, science should not be confined within white lab coat instead it should enter to public court for social upliftment.

Conflict of Interest

There is no financial interest or any conflict of interest exists in this manuscript.

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