UNIT- 7: LAWS, ETHICS & AWARDS FOR SCIENCE COMMUNICATION

UNIT STRUCTURE

7.1 Learning objectives
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7.3 Media Laws & Ethics
7.4 Laws related to Science
7.5 Awards for Science Communication
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7.1 LEARNING OBJECTIVES

After going through this unit you will be able to–

- explain the laws and ethics of science communication
- elucidate the need and significance of health communication
- explain the concept of environmental communication

7.2 INTRODUCTION

In this unit we will concentrate on the laws and ethics of Science Communication. The need and role of ethics in science communication will also be given particular attention here. In science communication laws and ethics are of particular significance as the entire concept is a broad one and needs elaboration. The following sections of the unit deal with such vital issues as freedom of speech and expression, media freedom and defamation and above all, the Official Secrets Act of 1923 and the Right to Information Act.

7.3 MEDIA LAWS & ETHICS

Media laws in India have a long history and are deeply rooted in the country's colonial experience under the British rule. The earliest regulatory measures can be traced back to 1799 when Lord Wellesley promulgated the Press Regulations, which had the effect of imposing pre-censorship on an infant newspaper publishing industry. The onset of 1835 saw the promulgation of the Press Act, which undid most of the repressive features of the earlier legislations on the subject. After that the then govt. enacted some other rules and regulations for the press, such as Gagging Act of 1857, Press and Registration of Books Act of 1867, Vernacular Press Ac' of 1878, Newspapers (Incitement to Offences) Act of 1908 etc.

Finally, the most significant day in the history of Media Regulations, was the 26th of January 1950 – the day on which the Constitution was brought into force. The colonial experience of the Indians made them realise the crucial significance of the 'Freedom of Press'. Although, the Indian Constitution does not expressly mention the liberty of the press, it is evident that the liberty of the press is included in the freedom of speech and expression under Article 19(1) (a). Thus, press freedom came to be enshrined in our constitution and became a fundamental right gauranting personal freedom in matters of speech and expression. Media also came to enjoy a good deal of freedom while maintaining the required norms of ethics.

In the next section of this course, we will discuss some important laws related to science.

7.3.1 Freedom of Speech and Expression

The Freedom of Press and the Freedom of Expression can be regarded as the very basis of a democratic form of government. Freedom of speech and expression means the right to express one's own ideas and opinions freely by words of mouth, in writing and printing, in pictures or any other possible mode. It thus includes the expression of one's ideas through any communicable medium or visible representation, such as, gesture, signs

and the like. It means to speak freely without censorship. The freedom of expression also includes publication and thus, the freedom of press is included in this category.

Freedom of speech and expression is the most basic of all freedoms granted to the citizens of India under Article 19(1)(a). The freedom of speech and that of the press lie at the foundation of a democratic society, for without free political discussions, no public education is possible, which is so important for the proper functioning of the government. It allows us to express our ideas and thoughts freely through any medium such as print, visual, and voice. One can use any communication medium of visual representation such as signs, pictures, or movies.

7.3.2 Effects of Media Freedom During Emergency

There is no provision in our Constitution for the suspension of the Fundamental Rights except during the Emergency period as mentioned under the provisions in Part XVIII. Two Provisions relevant in this context are Articles 358 and 359. Article 358 deals with National Emergency, which empowers the state to suspend the operation of Article 19 (Right to Freedom of Speech and Expression which includes Freedom of Media) during the operation of a Proclamation of Emergency made under Article 352. Any law or order made after the coming into operation of the Proclamation of Emergency, cannot be challenged on the ground of violation of any provision of Article 19. Even after the Emergency is over, the constitutionality of the acts done during Emergency cannot be challenged on the same ground. Therefore, the effect of Article 358 is enormous on the Media Freedom which is guaranteed by Article 19. As soon as the Proclamation ceases to operate, the legislative enactments passed and the executive actions taken during the course of emergency shall be inoperative and Article 19 which remains suspended during the Emergency is automatically revived and begins to operate. The suspension of Article 19 under Article 358 applies to the whole country and covers all the States.

7.3.3 Defamation

Defamation is an intentional false communication, either written or spoken, that causes injury to a person's reputation, which is considered his precious property. Defamation is an actionable wrong. The wrong of defamation consists in the publication of a false and defamatory statement in respect another person without lawful justification or excuse.

There are *two* kinds of defamation: *Written* and *Verbal*. The common law origins of defamation lie in the torts of 'slander' (harmful statement in a transitory form, especially speech) and 'libel' (harmful statement in a fixed medium, especially in writing but also a in picture, sign, or electronic broadcast), each of which gives a common law right of action. The fundamental distinction between libel and slander lies solely in the 'form' in which the defamatory matter is published. If the offending material is published in some fleeting form, as by spoken words or sounds, sign language, gestures and the like, then this is slander. If it is published in more durable form, for example, in written words, film, compact disc (CD), DVD, in virtual space like Internet and the like, then it is considered libel. In more simple language, verbal defamation is known as slander while written defamation is known as libel.

7.3.4 Official Secrets Act, 1923

The Official Secrets Act, 1923 (OSA) is a comprehensive document relating to official secrets and it defines a number of offences. The Act is aimed at maintaining the security of the State against leakage of secret information, sabotage and the like. It is India's anti-espionage legislation held over from British colonisation. It states clearly that any action which involves helping an enemy state against India is liable for punishment. It also states that one cannot approach, inspect, or even pass over a prohibited government site or area. According to this Act, helping the enemy state can be in the form of communicating a sketch, plan, model of an official secret, or of official codes or passwords, to the enemy. The disclosure of any information that is likely to affect the sovereignty and integrity of India, the security of the State, or friendly relations with foreign States, is punishable by this act. The Act is

important from the point of view of the Press since many of the acts prohibited by law may be committed by newspapers and journalists, as private individual, while performing their duties.

7.3.5 The Right to Information Act

In 2005, the Right to Information Act 2005 (Act No. 22/2005) was enacted by the Parliament of India giving the citizens of India access to records of the Central Government and State Governments. The Preamble of the RTI Act sets out that it has been passed “in order to promote transparency and accountability in the working of every public authority”. It also states that the Act will “harmonise” “the conflicting interests” of “revelation of information” with “public interests including efficient operations of the Governments” and “the preservation of confidentiality of sensitive information”.

Under the Act, all complying departments must appoint their Public Information Officer (PIO). Any citizen of India may submit a request to the PIO for information in any format, paper or electronic. It is the PIO’s responsibility to ensure that the information is obtained from the appropriate department or section. If the request pertains to another public authority (in whole or part) it is the PIO’s responsibility to transfer/forward the concerned portions of the request to a PIO of the other authority within 5 days.

7.3.6 Prasar Bharati Act, 1990

In India, it was felt in the late 1980s that media should be under the control of the public as distinct from the Government. It should be operated by a public statutory corporation or corporations, as the case may be, whose constitution and composition must be such as to ensure its/their impartiality in political, economic and social matters and on all other public issues. Prasar Bharati (Broadcasting Corporation of India) Act, 1990 came into force from 15th of September, 1997.

The Act provides for the grant of autonomy to electronic media, namely, All India Radio and Doordarshan, which were earlier working as independent media units under the Ministry of Information & Broadcasting. The intention

is that the Corporation shall function as a genuinely autonomous body with an innovative, dynamic and flexible approach and with a high degree of credibility. Further, the Corporation as an autonomous body shall function in a democratic manner enriching our democratic traditions and institutions, being responsible to the people and the Parliament of India and keeping in mind the different traditions, languages and cultures of the country and various sections of the society.

7.3.7 Copyright Act

In the previous unit we have got an idea on the Copy Right Act 1957. Here we will have a brief concept of the technical part of the Copy Right Act 1957. A work of literature (including software) drama, music or art is an intellectual property. It must be protected from illegal copying or reproducing. The Copy Right Act, 1957 accords the protection.

In case of copyright there is no need to register the owner in India. The basic permit for copyright is that the author will be the owner of the copyright which refers to the person who actually did the job or sometime to the original source. On the otherhand, if the author is an employee and the job/ work was created in accordance with the term of employment then the employer will own the copy right. In the Copyright Act, there is a provision for joint owners. The copyright owner gets the monopoly right until 60 years from the beginning of the year in which the work is first published.

The copy Right Act 1957 was amended in 1994. This amendment aims to empower an individual author to exercise his or her 'moral rights' in connection with his/her own literary, dramatic, musical or artistic work and cinematograph films. This right is not transferable to anyone.

7.3.8 Some Other Important Laws

Following are some other important laws pertaining to media freedom:

- **The Press and Registration of Books Act, 1867** – This Act regulates printing presses and newspapers and makes registration with an appointed Authority compulsory for all printing presses.

- **The Press (Objectionable Matters) Act, 1951** – This enactment provides against the printing and publication of incitement to crime and other objectionable matters.
- **The Newspaper (Prices and Pages) Act, 1956** – This statute empowers the Central Government to regulate the price of newspapers in relation to the number of pages and size and also to regulate the allocation of space to be allowed for advertising matter.
- **Defence of India Act, 1962** – This Act came into force during the Emergency proclaimed in the context of indo-Chinese was in 1962. This Act aimed at restricting the Freedom of the Press to a large extent keeping in mind the unrest prevailing in India in view of the war against China. The Act empowered the Central Government to issue rules with regard to prohibition of publication or communication that is prejudicial to the civil defence/military operations, prevention of prejudicial reports and prohibition of printing or publishing any matter in any newspaper.
- **Delivery of Books and Newspapers (Public Libraries) Act, 1954** – According to this Act, the publishers of books and newspapers are required to deliver, free of cost, a copy of every published book to the National Library at Calcutta and one copy each to three other public libraries specified by the Central Government.
- **The Working Journalists and other Newspaper Employees (Conditions of Service and Miscellaneous Provisions) Act, 1955** – It lays down the minimum standards of service conditions for newspaper employees and journalists.
- **Civil Defence Act, 1968** - It allows the Government to make rules for the prohibition of printing and publication of any book, newspaper or other document prejudicial to the Civil Defence.
- **Press Council Act, 1978** – Under this Act, the Press Council was reconstituted (after 1976) to maintain and improve the standards of newspapers and news agencies in India.
- **Cable Television Networks (Regulation) Act, 1995** basically regulates the operation of Cable Television in the territory of India and

regulates the subscription rates and the total number of total subscribers receiving programmes transmitted in the basic tier. In pursuance of the **Cable Television Network (Regulation) (Amendment) Bill, 2002**, the Central Government may make it obligatory for every cable operator to transmit or retransmit programme of any pay channel through an addressable system as and when the Central Government so notifies. Such notification may also specify the number of free to air channels to be included in the package of channels forming the basic service tier.

- **The Cinematograph Act, 1952** – The Cinematograph Act of 1952 has been passed to make provisions for a certification of cinematographed films for exhibitions by means of Cinematograph. Under this Act, a Board of Film Censors (now renamed Central Board of Film Certification) with advisory panels at regional centres is empowered to examine every film and sanction it whether for unrestricted exhibition or for exhibition restricted to adults. The Board is also empowered to refuse to sanction a film for public exhibition.



CHECK YOUR PROGRESS

Q.1: What is Defamation?

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7.4 LAWS RELATED TO SCIENCE

7.4.1 Indian Patent Act 1970

The Patent Act, 1970 was amended in the context of India's time bound international obligations under the Argent on Trade Related Aspects of Intellectual Property Right (TRAIPR) coupled with the necessity for integrating and harmonizing the Indian Patent Regime with international practices for providing a rationalized and user friendly system.

The earliest known patent on an invention was awarded in Florence in 1421 to *Filippo Brunelleschi* for a barge with hoisting gear capable of transporting marble. In Britain the first such patent was awarded in 1449 to a Flemish glassmaker for a method of making stained glass windows. During the sixteenth century the English monarchs discovered that the sale of monopoly privilege could be very lucrative and granted patents on an indefinite basis to all manners of trades and manufactures, regardless of their novelty. Even the trade in commodities such as leather, salt, iron, and paper was patented. The consequent high prices of these goods led to accusations that such perpetual monopolies were unjust. Responding to this criticism, numerous patents were revoked. For example, the monopoly on the production of playing cards granted to Edwin Darcy was rescinded.

A patent is an exclusive right granted for a product or a process that provides a new way of job/work or offers a new technical solution to a problem. In some countries, the patents are granted to offer the main criteria for patentability. In India patent law came into existence with the Patent Act 1970.

There are various types of patents-

(a) Standard Patent: Applying for provisional patent is known as 'hold the line'. The permission for a standard patent (after getting complete application) will bestow full patent rights on the appealer. The amendment of Patent Act 1970 proposes that the period of standard patent protection will be from 14 to 20 years (depending upon when it is applied)

(b) Innovation patent: Actually it is a lower form of patent than the standard patent. There is some limitation in this type of patent. The enterprise can apply for only a maximum of five 'claims', but in case of a standard patent an enterprise can make any number of claims. Here the patent is functionally embedded in the invention.



LET US KNOW

INDIAN PATENT SYSTEM

- The first legislation in India relating to patents was the Act VI of 1856. The objective of this legislation was to encourage inventions of new and useful manufactures and to induce inventors to disclose secret of their inventions. The Act was subsequently repealed by Act IX of 1857 since it had been enacted without the approval of the British Crown
- In 1872, the Act of 1859 was consolidated to provide protection relating to designs. It was renamed as "The Patterns and Designs Protection Act" under Act XIII of 1872.
- This Act remained in force for about 30 years without any change but in the year 1883, certain modifications in the patent law were made in United Kingdom and it was considered that those modifications should also be incorporated in the Indian law.
- The Indian Patents and Designs Act, 1911, (Act II of 1911) replaced all the previous Acts. This Act brought patent administration under the management of Controller of Patents for the first time.
- After Independence, it was felt that the Indian Patents & Designs Act, 1911 was not fulfilling its objective. It was found desirable to enact comprehensive patent law owing to substantial changes in political and economic conditions in the country. Accordingly, the Government of India constituted a committee under the Chairmanship of Justice (Dr.) Bakshi Tek Chand, a retired Judge of Lahore High Court, in 1949 t o review the patent law in India in order to ensure that the patent system is conducive to the national interest. The committee submitted its interim report on 4th August, 1949 with recommendations for prevention of misuse or abuse of patent right in India and suggested amendments to sections 22, 23 & 23A of the Patents & Designs Act, 1911 on the lines of the United Kingdom Acts 1919 and 1949.

- Based on the above recommendation of the Committee, the 1911 Act was amended in 1950(Act XXXII of 1950) in relation to working of inventions and compulsory licence/revocation.
- In 1957, the Government of India appointed Justice N. Rajagopala Ayyangar Committee to examine the question of revision of the Patent Law and advise government accordingly. The report of the Committee, which comprised of two parts, was submitted in September, 1959. The committee recommended retention of the Patent System, despite its shortcomings. This report recommended major changes in the law which formed the basis of the introduction of the Patents Bill, 1965. This bill was introduced in the Lok Sabha on 21st September, 1965, which however lapsed. In 1967, again an amended bill was introduced which was referred to a Joint Parliamentary Committee and on the final recommendation of the Committee, the Patents Act, 1970 was passed. This Act repealed and replaced the 1911 Act so far as the patents law was concerned. However, the 1911 Act continued to be applicable to designs. Most of the provisions of the 1970 Act were brought into force on 20 th April 1972 with publication of the Patent Rules, 1972.
- This Act remained in force for about 24 years without any change till December 1994. An ordinance effecting certain changes in the Act was issued on 31 st December 1994, which ceased to operate after six months. Subsequently, another ordinance was issued in 1999. This ordinance was subsequently replaced by t he Patents (Amendment) Act, 1999 that was brought into force retrospectively from 1 st January, 1995. The amended Act provided for filing of applications for product patents in the areas of drugs, pharmaceuticals and agro chemicals though such patents were not allowed. However, such applications were to be examined only after 31-12-2004. Meanwhile, the applicants could be allowed Exclusive Marketing Rights (EMR) to sell or distribute these products in India, subject to fulfilment of certain conditions.

- The second amendment to the 1970 Act was made through the Patents (Amendment) Act, 2002 (Act 38 0f 2002). This Act came into force on 20 th May 2003 with the introduction of the new Patent Rules, 2003 by replacing the earlier Patents Rules, 1972
- The third amendment to the Patents Act 1970 was introduced through the Patents (Amendment) Ordinance, 2004 w.e.f. 1 st January, 2005. This Ordinance was later replaced by the Patents (Amendment) Act 2005 (Act 15 Of 2005) on 4 th April, 2005 which was brought into force from 1-1-2005.

Patents Rules

- Under the provisions of section 159 of the Patents Act, 1970 the Central Government is empowered to make rules for implementing the Act and regulating patent administration. Accordingly, the Patents Rules, 1972 were notified and brought into force w.e.f. 20.4.1972. These Rules were amended from time to time till 20 May 2003 when new Patents Rules, 2003 were brought into force by replacing the 1972 rules. These rules were further amended by the Patents (Amendment) Rules, 2005 and the Patents (Amendment) Rules, 2006. The last amendments are made effective from 5 th May 2006.

(For details the learners may visit the official website at http://www.patentoffice.nic.in)

Requirements to apply for patent

The permission for applying for a patent remains with the inventor of that particular product/idea. Sometimes there comes a problem as to who is the true inventor? The clear identification of the inventor is a fundamental step in commercializing inventions, which involves the entrepreneur. On the other hand, the ownership claim varies as there may be joint inventors who will own the patent and will have the equal share of patent right. But this factor is an added problem in the commercialization of IP. The general duration of patent is 14 to 20 year but under some consideration it can be extend by 5 more years.

In brief, it can be said that the patent owner has the right (during the tenure of patent) over the invention. The owner can exploit the right in terms of hiring, selling, licensing, importing and using a process to do something.

It is very important to mention here another or different question in an application of patent like 'who is the man behind the new idea'? Is the invention still confidential? Is the invention any tangible object or a new process for doing something? Etc.

7.4.2 Cyber Law

According to Wikipedia, the cyber law covers the legal issues related to the use of inter networked information technology. It is less a distinct field of law in the way that property or contracts are as it is a domain covering many areas of law and regulation.

Internet has evolved as a new medium. We receive e-mail, we take information from different website, we conduct electronic commercial transactions on pre-determine site, we download movie, songs. There are so many important necessities which the internet helps to fulfil. But we never bother about the different issues regarding cyber law unless we are somehow involved. We need to have a brief but clear concept on cyber law for our own benefit.

7.4.2.1 Types of cyber crime

1. Individual affected by crime

Based on how an individual is affected ness by crime, cyber crime is differentiated into three categories- **Infringement of Privacy, Identify theft, and Cyber stalking.**

2. Economy affected by crime

Based on how the economy is affected ness by crime, cyber crime is broadly differentiated into three categories- **Hacking, Computer virus etc.** Those who have watched the film *Om Jai Jagadish* or *Fida* can understand the reality of Computer Hacking. There are many films featured on the particular topic 'Hacking'. Hacking refers the unlawful penetration of a computer

system. Information Technology Act 2000 provides for imprisonment upto 10 years or Rs. 2 Lakhs fine or both 'Hacking' as an offence.

3. National Security affected by crime

Based on the national security being affected by crime, cyber crime is broadly divided into different categories. Out of which Cyber Terrorism is considered most important. The creation of terrorism through cyber space is called cyber terrorism.

4. Other crimes through cyber space

The word 'pornography' is much known to us. Blue film, sex tourism, other pornography incidents through cyber space are some of the factors that cause problem for our growth.

7.4.2.2 Cyber laws in India

In May 2000, the both houses of Indian Parliament passed the Information Technology Bill which is known as the IT Act 2000. It includes cyber laws. IT Act emphasizes the legal infrastructure for e-commerce, legal frame work for all electronic records.

The IT Act aims to provide legal recognition for transactions carried out by means of electronic data interchange and other means of electronic communication, commonly referred to as "electronic commerce", which involves the use of alternatives to paper-based methods of communication and storage of information. It also facilitate electronics filing of documents with the government agencies.

In addition, the Central Government also notified two distinct kinds of Rules. These rules are: The Information Technology (Certifying Authorities) Rules, 2000 and the Cyber Regulations Appellate Tribunal (Procedure) Rules, 2000.

7.4.3 Drug and Magic Remedies Act, 1954

Drug and Magic Remedies (Objectionable Advertisement) Act, 1954 had been enacted to control the advertisements of drugs in certain cases and to prohibit the advertisement for certain purposes of remedies alleged to

have possessed magic qualities and also to provide for matters connected therewith.

As it stands, the Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954, basically prohibits four kinds of advertisements pertaining to drugs and magical cures. Section 3 of the Act says that no person shall take any part in the publication of any advertisement promoting a drug or leading to the use of a drug for the procurement of miscarriage in women or prevention of conception in women; the maintenance or improvement of the capacity of human being for sexual pleasure; and correction of menstrual disorders in women.

Section 3 further prohibits any advertisement promoting drugs for the diagnosis, cure, mitigation, treatment or prevention of any disease, disorder or condition specified in the Schedule. The schedule lists a number of diseases, disorders or conditions such as diabetes, cataract, cancer, fevers (in general), obesity, rheumatism, impotence, high or low blood pressure, female diseases, epilepsy, stature of persons, venereal diseases, glaucoma, sterility in women, dropsy, etc.

Section 4 of the Act prohibits those advertisements relating to a drug if such advertisements contain any matter which directly or indirectly gives a false impression regarding the true character of the drug or makes a false claim for the drug or which is otherwise false or misleading. Section 5 of the Act prohibits advertisements of magic remedies for treatment of certain diseases and disorders.

Violation of the law attracts imprisonment for six months or fine or both, for first conviction and for subsequent conviction, imprisonment for a year or fine or both.

7.5 AWARDS FOR SCIENCE COMMUNICATION

Kalinga Award

The **Kalinga Prize for the Popularization of Science** is an award given by UNESCO for exceptional skill in presenting scientific ideas to lay people. It was created in 1952, following a donation from the Kalinga Foundation Trust in India.

NCSTC AWARDS

National awards for science communicators are presented every year to recognize outstanding achievements of individuals and institutions. Each award comprises an attractive cash prize, a memento and a scroll presented at a national function on Science Day. The categories are-

- Outstanding Effort in Science & Technology Communication
- Outstanding Effort in S&T Communication through Books & Magazines
- Outstanding Effort in S&T Popularization among Children
- Outstanding Effort in Translation of Popular S&T Literature
- Outstanding Effort in S&T Communication in the Print Medium
- Outstanding Effort in S&T Communication in Electronic Medium

ISCA AWARD

Indian Science Congress Association instituted this award in 1994-95, and is given annually to an Indian national who has sustained interest for Popularising Science. The award carries a cash amount and a plaque. The recipient has to deliver a lecture on the topic of his/her contributions in the **Committee on Science and Society** during the Science Congress.

INSA INDIRA GANDHI PRIZE FOR POPULARIZATION OF SCIENCE

The award was instituted by the Indian National Science Academy in 1986 to encourage and recognize popularization of science in the country. The prize shall be awarded once in three years for outstanding work done by an individual for the popularization of science in any Indian language, including English. The nominee must have had a distinguished career as a writer, editor, journalist, lecturer, radio or television programme director, science photographer or as an illustrator, which has enabled him/her to interpret science (including medicine), research and technology to the public. He/ She should have knowledge of the role of science, technology and research in the enrichment of cultural heritage and in solution of problems of humanity. The first award was made in 1986.



7.6 LET US SUM UP

In this unit you have learned about the role of ethics, laws and awards for science communication. You have also come across the different areas where this is important. How this type of communication is helpful has also been discussed in this unit. You have also come to know about Cyber law and various related Acts.



7.7 FURTHER READING

- **Aggarwal, Vir Bala, Gupta, V.S. (2006). Handbook of Journalism and Mass Communication. New Delhi :** Concept Publishing company



7.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. No. 1: Defamation is an intentional false communication, either written or spoken, that causes injury to a person's reputation, which is considered his precious property.



7.9 POSSIBLE QUESTION

Q.1: What is Cyber Law? What are its different types?

Q.2: What are the different laws related to science communication?

Q.3: Discuss Indian Patent Act 1970. What are the requirements for applying for a patent?

Q.4: How is freedom of speech guaranteed in Indian constitution?

Q.5: Write short notes on:

a) Defamation.

b) Right to Information Act.

c) Defence of India Act 1962.

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