

## 211. Researcher or Attention Grabber? Is Intellectual Property a Means to Communicate Scientifically?

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**Abstract.** Scientists and researchers have been using publications and Intellectual property as a means of scientific communication. But in an endeavor to protect their works they seem to be losing the essence of science. Science is a collective effort where the results obtained in one scientific exercise are used as the input for some other scientific production.

The author in this literary article intends to outline the paradox that the scientific world needs to solve. Is a scientific invention somebody's intellectual property that he/or she only has a right to deal with in a manner he/she thinks is appropriate or should the moral responsibility of a scientific mind be to share with all humanity without prejudice whatever science and nature reveals to us.

This paper briefly goes into the historical background of the Laws relating to Intellectual Property Right in the world and also in India in Particular. It deals with the question of the conceit of a scientist and how it hampers the progression of knowledge.

This paper also deals with what are the main motives behind engaging in scientific quest and what is the role of scientific communication in it. It deals with the insecurities of a researcher and the desire to get attention from the scientific community being the force driving the scientific communication today.

**Keywords:** Scientific pursuit, Intellectual property right, Intangible, WIPO, TRIPS, WTO

### Introduction

Science (Latin word meaning 'knowledge') is the systematic knowledge of the physical or material world gained through observation and experimentation and 'Scientific pursuit' is a method of research in which a problem is identified, relevant data are gathered, a hypothesis is formulated from these data, and the hypothesis is empirically tested. But for a person wishing to gain scientific knowledge or trying to tread on a path of scientific pursuit it becomes imperative to gain a coherent picture of the sources and developmental stages of scientific ideas. Without this, 'Science' may seem to be a random collection of formulae and laws.

What nature reveals to us as scientific facts or the truths are put to productive use only when they are interrelated. Any person, may it be a student trying to gain some scientific knowledge or a researcher carrying on with some research activity can understand and appreciate the significance of this productive utilisation only when the various developmental stages and their interrelationships can be traced by him or her.

When a scientific mind or a number of them together create a new invention or come across a great discovery, there is definitely a great sense of achievement and pride associated with it. But along with this sense of achievement and pride there also sets in an element of insecurity. What if this great innovation or creation, achieved at an enormous cost in terms of funds, intellectual investments and human efforts, gets stolen or copied by somebody? Why shouldn't law permit him/her to safeguard this creation as his/her own property? Why can't this intellectual property be treated as an asset and purchased, sold, gifted or bartered as any other form of personal property?

The answers to all these insecurities of a scientist or researcher need to be addressed with great caution because of the intangible nature of intellectual property. It is this intangibility and perceptibility that sets apart intellectual property from other forms of personal property, and hence the requirement for some special laws and regulations. Intellectual property is a broad concept that covers several types of legally recognized rights arising from some type of intellectual creativity, or that are otherwise related to ideas[1]. Intellectual Property Rights(IPR) are rights to intangible things[2]—to ideas, as expressed (copyrights), or as embodied in a practical implementation (patents). This very idea of giving property rights over ideas, processes, inventions and other such scientific creations calls upon a debate on their moral justifiability.

Creativity requires a greatly varied and unrestricted public domain. Growth in science and technology is a cumulative process, with each new contributor working and developing his models and theories based on the inputs from the works of others who came earlier. IPR, in granting special rights over such intellectual property, not only grants ownership to the creator, it also awards a monopoly to him or her over his creation. This denial of the unrestricted public domain for creativity and scientific pursuit can immensely hamper the progress of science and technology.

Thus, the big Question the world of science and technology faces today: Is a scientific invention somebody's intellectual property that he/or she only has a right to deal with in a manner he/she thinks is appropriate or should the moral responsibility of a scientific mind be to share with all humanity without prejudice whatever science and nature reveals to us?

### Intellectual Property Right: Historical Background

Globalisation has taken place at a rapid pace from the 19th century through the 20th and continues in the 21st century. This can be observed in the ever increasing flow of goods, investments and ideas across the international borders. Intellectual property which is the creative work of the human intellect, has also assumed importance throughout the world in the recent past.

The Historical Background of Intellectual Property Right can be traced as follows:

- (i) Coordination of IPR at the international level started in the 19th century at the Paris and Berne conventions. These were combined in 1893 and the combined entity functioned under several names, the most recent being BIRPL (French acronym for United International Bureau for the Protection of Intellectual Property).
- (ii) It became the main subject matter of the World Intellectual Property Organisation (WIPO), established in Stockholm on 14th July, 1967. WIPO became one of the sixteen specialised agencies of the UN in December 1974 and was responsible for taking appropriate action for promoting creative intellectual activity and for facilitating the transfer of technology related to the intellectual property to the developing countries in order to accelerate their economic, social and cultural development.
- (iii) A landmark development in the international economic relations was the successful conclusion in 1994, of the negotiations on the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS). TRIPS has now become a part of the legal obligations of the World Trade Organisation (WTO). Thus Intellectual Property has also become a part of the WTO- the only organisation dealing with the rules of trade between nations.

### So, What is Intellectual Property and the Paradox?

The motivation behind the protection of Intellectual Property is to encourage and reward creativity. Statutory protection is given to the rights of a creator in his creation and also to the rights of the public in accessing these creations.

According to art 2 (viii) of the 'Convention Establishing the World Intellectual Property Organisation (WIPO) 1967', intellectual property includes rights related to (i) literary, artistic and scientific works; (ii) performance of performing artists, phonograms and broadcasts; (iii) inventions in all fields of human endeavour; (iv) scientific discoveries; (v) industrial designs; (vi) protection against unfair competition; and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.

Intellectual property, from the point of view of communication in Science and Technology, is usually concerned with (a) Copyright, (b) Patents as Industrial Property. It becomes imperative here to understand the meaning of the above mentioned two branches and the controversies, if any, associated with both.

**Copyright:** The copy right act grants to the owner of copyright various exclusive powers like right to reproduce the work in any material form; to issue copies of the work to the others; to perform the work in public or communicate it to the public in any manner. The main objective behind laws related to copyright across nations should be to promote the progress of science and useful arts.

The Indian Copyright Act, 1957 provides that copyright shall subsist in a published work within the lifetime of the author until sixty years from the beginning of the calendar year next following the year in which the author dies. In a similar manner the Copyright Act of the United States of America which is largely based on the British statutes grants a copyright during the lifetime of the author and another seventy years from his death.

The question most crucial at this stage is that whether the State should have the power to curtail the exclusive ownership rights of an author, to a limited period? Why should his rights in his intellectual property not flow from one generation to the next, as is the case with his material possessions? Why should his children and grand children be deprived of their legacy sixty years or so after his death?

The only way this problem can be answered is by looking at the fact that the Copyright Act grants a monopoly where no such monopoly really existed. If Kirchhoff had taken a copy right on his Current and Voltage Laws, instead of introducing them as a foot note in one of his research papers, all the developments in Electrical technology would have surely got a severe setback. One has to understand that the Copyright is not a natural right but is a virtual right, created to give certain benefits to the author that work as an incentive to pursue the path of creative innovation. Expiry of this right should not be a deterrent in the process of acquiring and disseminating knowledge. But at the same time, it has to be kept in mind that the public or society definitely has a right to free trade and expression.

**Patents/ industrial property:** Industrial property refers to creation of human mind in the form of inventions and industrial designs. Inventions here imply new answers to scientific and technological problems whereas Industrial designs refer to new appearances of industrial products. Patents provide an exclusive right to an inventor to use his invention for a certain period of time provided the invention (a new product or process) made is new or novel, involves an inventive step and has some industrial application.

Patents Laws were historically developed to give the inventor an appropriate share in the benefits from their inventions. This is done by giving the patent holder a form of exclusive control for 20 years from the filing of the patent. The Patent Law got extended to an array of inventions, over the 19th and 20th century. The originality required for an industrial design to be patented has become a questionable area. Till the early 20th century, plants being products of nature could not be patented. But the Plant Patent Act now provides a special form of patent protection and this has been extended to cover new and distinct sexually reproducing plant varieties. A patent was granted to a U.S company for a compound in the neem tree which is a native subcontinent. Its usefulness and free availability throughout India and its applications in traditional Indian Ayurvedic Medicine, agricultural and household use made it Gandhi's favourite tree. Now with such patents being granted, it is possible that Indian citizens may be required to pay royalties on the products produced from neem.

Patenting of any life form is unethical as it results in commoditization of life forms. Living organisms are products of nature but the judiciary by a narrow margin of five is to four changed this status when it decided that a strain of bacteria that were modified by insertion of new genes was patentable because it was not naturally occurring and was expected to be useful for cleaning oil spills. The patent granted to the "Harvard Oncomouse", the first animal to be considered an invention set up a trend towards patenting genetically modified complex living beings.

Patenting of human life in the form of human genes, cell lines and tissues is being defended on the basis of the arguments that products of nature once used to produce a form not possible outside of a laboratory should be patentable. The University of California was granted a patent for a cell line removed from the cancerous spleen of a leukaemia patient while the California Supreme court decided that he did not have a right to his own cells once they had been removed from his body.

Bioprospecting or collecting natural products is considered the latest in the field of science and technology. Biospectators keep looking for the rich genetic resources and the indigenous knowledge of the Third world and this result in the indigenous communities having to pay royalties for products based on plants and knowledge that actually belong to them. The bio resources are for common heritage of the mankind and cannot be allowed to be patented at any cost. That these resources are under constant threat from the developed countries was learnt by India the hard way when Suman K.Das And Harihar P. Cohli were granted US patent 540,504 on 28th March 1995 on the use of Turmeric as wound healer. The patent holders were Non-resident Indians and the Council for Scientific and Industrial Research had to fight to revoke these patents. Similar patents were granted to extraction and storage processes of neem ; to Rice Tecc Inc. on Basmati lines and grains by the USPTO which had to be fought by India

One dreads to imagine how the evolution of mankind and the story of civilisation would have suffered, had the person who first created fire by striking couple of rocks against each other decided to patent his process of producing fire. Aristotle believed, and rightly so, that the sense of property cannot exist without sense of liberty. If one considers, ones intellectual property right acquired in the form of a patent ought to be perpetual and to be treated as sacrosanct, what happens to the liberty of others?

## **Conclusions**

Though copyrights and patents seem to be property from the creators' point of view, they also restrict the concept of liberty from the society's point of view at large. Intellectual property is definitely different from the physical property and needs to be dealt with great caution. While protecting the rights of a scientist to the products of his labour and intellect and while providing an incentive for future investments and inventions, the Laws governing the Intellectual Property Rights should also allow the works to be made open to the public to be used with other new innovations for the benefit of mankind. Intellectual Property needs to be shared freely for the good of the society and hence needs to be put in the 'Public Domain' but at the same time, rights of the creators need to be protected. What has to be observed

and respected is the line between overprotection and under protection and the classification of innovations and creative ideas that should or should not be granted this protection need to be done with great precaution and with only one purpose in mind and that is—Not to curtail the Rights of researcher by denying them the knowledge related to any developmental stage or depriving him or her the use of any earlier innovations that would help in their scientific pursuit . Let the tools of communication in science and technology be used for promotion of growth and betterment of science and technology and not to protect the conceit if a researcher or a scientist.

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1. In some European countries, the term “industrial property” is used instead of “intellectual property.”
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