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## INVENTION AND INNOVATION – ARE THEY COGNITIVE?

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### Abstract

Our ancient learned ones identified innumerable hidden secrets in the nature like location of galaxies, planetary movements and other celestial bodies besides various technological matters. The sound being produced by SUN recorded by NASA was exactly the same as stated in our Vedas – that is OME. New discoveries are getting termed as inventions and innovations which are not at all acceptable since their roots are found in our Vedic scriptures. Invention is the conception of idea whereas innovation is the subsequent translation of the invention into the economy (US Department of Commerce, 1967). Technology is the practical implementation of knowledge, a means of aiding human endeavour. Innovation is the Management of all the activities involved in the process of generation, technology, development, manufacturing and marketing of a new (or improved) product or manufacturing or equipment. The Scientific and Technological Development is now unearthing these hidden secrets of nature which are painted as new inventions and innovations.

**Keywords:** Dadaism, Innovation, Invention, Technology, Vedas,

### Introduction

Many authors have defined Invention and Innovation sources, methods, approaches, drives to find out or to create what does not exist to enlighten the world to open new vistas of knowledge. As can be observed, all stated inventors or innovators are to be equated and termed as discoverers since everything exists in the universe which was proved beyond an iota of doubt by many sages and saints in the generations before. Our ancient learned ones identified innumerable hidden secrets in the nature like location of galaxies, planetary movements and other celestial bodies besides various technological matters. Sage Sushruta created an apparatus which can cut one single layer of long hair into two pieces vertically. Is it not today's nanotechnology? Ravana and Kubera had aeroplanes which used to fly on chanting of mantras. Now these mantras are converted into yantras (machines). Sun's distance from earth was

mentioned by poet Tulasidas in Hanuman Chalisa centuries ago when Hanuman had flown to Sun believing it as a fruit. This distance was measured and declared right by NASA. The sound being produced by SUN recorded by NASA was exactly the same as stated in our Vedas – that is OME. Susruta conducted deliveries by surgical incision through the abdominal wall and uterus which is later popularly known as caesarean operation. So to say – the so called new findings are called inventions and innovations which in fact are only discoveries. The emerging creations - in the view of this author are only improvements or improvisations of the existing systems but not real or actual innovations or inventions. As and when science and technology is gaining momentum, new discoveries are getting termed as inventions and innovations which are not at all acceptable since their roots are found in our Vedic scriptures.

### **Invention**

If one accepts that inventions are new discoveries, new ways of doing things and those products are the eventual outputs from the inventions that process from new discovery to eventual product is the innovation process. A useful analogy would be education, where qualifications are the formal outputs of the education process. Education, like innovation is not and cannot be viewed as an event.

Alignments become stale when we attempt to define terms such as new creativity or discovery. It often results in a game of semantics first what is new to one company may be 'old hat' to another. Second- how does one judge achieve success in terms of commercial gain on scientific achievement? Are they both not valid and justified goals in themselves? Third – it is context dependant – what is viewed as a success today may be viewed as a failure in the future. We need to try to understand how to encourage innovation in order that we may help to develop more successful new products.

Invention is the conception of idea whereas innovation is the subsequent translation of the invention into the economy (US Department of Commerce, 1967). The following simple equation helps to show the relationship between the two terms

INNOVATION = THEORITICAL CONCEPTION + TECHNICAL INVENTION + COMMERCIAL EXPLOITATION.

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The process of converting intellectual thoughts into tangible new artefact (usually a product or process is an Invention).

### **Innovation**

Innovation and invention are two different terms. Innovation is the first cousin of invention. But they are not identical twins that can be interchanged. Hence, it is important to establish clear meanings for them. Innovation itself is a very broad concept that can be understood in a variety of ways. One of the more comprehensive definitions is offered by Myers and Marquis (1969) Innovation is not a single action but a total process of interrelated sub processes. It is neither just the conception of a new idea nor the invention of a new device nor the development of a new market. The process of all these things is acting in an integrated fashion. What is NEW in the context of innovation? Rogers and Shoemaker (1972) do this eloquently. It matters little as far as human behaviour is concerned whether or not an idea is ‘objectively’ new as measured by the lapse of time since its first use or discovery. If the idea seems new and different to the individual, it is an innovation. Innovation is the Management of all the activities involved in the process of generation, technology, development, manufacturing and marketing of a new (or improved) product or manufacturing or equipment.

(Extracts from “Paul Trott” Author of “Innovation Management and New Product Development)

### **Science and Technology**

Technology can be defined as all the knowledge, products, processes, tools, methods of goods or in providing services. In simple terms, technology is the way we do things. It is the means by which objectives are accomplished. Technology is the practical implementation of knowledge, a means of aiding human endeavour.

Science refers to a systematic body of knowledge acquired by mankind through observation, experimentation and intelligent application, which can be subjected to verification. It is based on logical consistency systematic explanation, critical evaluation and experimental analysis. Therefore, science and technology go in collocation.

We also need to consider the role played by Science and Technology at the end of the nineteenth century and subsequent growth in university teaching and research has led to the development of many new strands of science. The proliferation of scientific journals over the past thirty years demonstrates the rapidly evolving nature of science and technology. The scientific literature seems in double in quantity every five years. Technology is knowledge applied to products or production processes. No definition is perfect and any system is no exception.

Break through inventions are based on fundamental scientific research that leads to new avenues, but which emerge unpredictably and virtually impossible to manage. They happen when they happen, so relying on whatever is still cooking in the lab is not a reasonable approach to managing for the future.

Fusion innovations in contrast, are those that come about through the intentional combination or fusion of separate disciplines or bodies of knowledge to create new ones. Biotechnology, Nanotechnology and Mechatronics are all examples of fusion innovations that have had significant global impacts. (Extract from “William L. Miller and Langadon Morries” Authors of “Managing Knowledge Technology and Innovation.”)

## Conclusion

Indian heritage, honour, glory, serendipity rests on its Vedic Scriptures which are considered as treasure trove. Out of sheer fecundity, the scholars of that age unfolded innumerable secrets of nature consisting of technology and other various aspects on cosmos. All these are hidden treasure. The Scientific and Technological Development is now unearthing these hidden secrets of nature which are painted as new inventions and innovations.

The stars, the Sun, the Moon and all planetary movements are well defined very accurately ratiocinated in Indian Almanacs. These are being confirmed by NASA from time to time in its scientific explorations and experiments. When we talk about the celestial bodies, immediate reprehension is focussed by the non-believers of the Supreme Power or our Vedic tenets. Such Dadaism never gained sanctions by the Scientists and Vedic Scholars.

In Indian ancient cultural edifice – Mohenjo-Daro and Harappa excavations unfolded how scientifically the people at that age manufactured the tools with great technical precision they

required for eking out their livelihood. In Mahabharata, Arjuna gained knowledge and skill for targeting arrows in dark on listening to the sound from elsewhere. The advanced nations are inventing (in fact discovering) the ammunition based on this Vedic knowledge only. Equivalent weapons like Brahmastra, Pasupatastra and what is said as most powerful weapon Ramabana (arrow of Rama) which can destroy not only this earthly universe but also all the fourteen worlds as enshrined in our scriptures, could not be built so far and it is surely difficult to realise this project. Indian culture was strengthened with the enlightenment of all four Vedas. One of them, the last one is known as Athervana Veda which contains manufacturing of all varieties of not only weapons but also other equipment like aeroplanes, missiles, etc., by just chanting mantras. It was stated that our Vedic pundits were taken to Germany to get the Vedic hymns translated in to their language. These so called advanced countries have to go a long way to learn from our Vedas. It is only a panegyric expression of our scriptures. The intention is not flummoxing the present height of technological advancement, but also living in hedge and solely relied as friars neglecting the Vedic texts in all contexts. Lord Krishna listened to the cry of Draupadi from a distanced location and rescued her when she was in trouble. Is it not done without any mobile communication? The famous Siva temples in Kedarnaath (Uttaranchal), Kaleswaram (Telangana), Srisailam (Andhra Pradesh), Rameswaram and Chidambaram (Tamilnadu) were built in one angle of around 79 degrees. Was there GPS (Global Positioning System) at that time and how the Engineers arrived commonality remains a kind of technological miracle. In Vijayanagaram where king Krishnadevaraya ruled, the sculptures at one area, when certain pillars touched, the musical sound of sa-re-ga-ma-pa-da-ni (In English, it is - Do-Re-Mi-Fa-So-La-Ti) is still heard. The claps under a particular area in Golkonda fort in Hyderabad (Telangana state) is still echoing and it is stated to be heard at the entrance of the fort. Dead were given life again as righteousness was fully prevalent in that age. Kauravas also gained lives in incubators when their mother's pregnancy was split into hundred and one pieces. It is today's test tube baby. Prime Minister Narendra Modi touched mythological events and dealt with the importance of most ancient medicine Ayurveda and yoga on November 28, 2017 in his address in presence of Indian and American Entrepreneurs and Ivanka Trump, daughter of American President Donald Trump. Many examples can be cited to prove that all inventions or innovations are none but discoveries only. However, it cannot be denied the present inventions and innovations, but the intention is that it can be traced in our scriptures in one form or the other. It

is concluded by reminding the strong belief of Einstein “even after thousand years, man cannot unearth even one millionth secrets of nature.”

## References

Paul Trott, Author of “Innovation Management and New Product Development”

William L. Miller and Langadon Morries, Author of “Management Knowledge Technology and Innovation”

Extracts from Vedic Scriptures and Spiritual discourses of scholars