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EFFECTS OF TECHNOLOGICAL DEVELOPMENTS ON GLOBALIZATION

Venkatram subash.K[1], Manikanta.P[2], Pavan.B[3]

[1,2,3]*Electronics and Communication Engineering*

GIET (A) Rajamahendravaram

ABSTRACT

Much transmission and diffusion of technologies, with the has been written on the increasingly international generation, phenomenon having been given its own term—techno-globalism—and interpreted by some as displacing national systems of innovation and making redundant and futile any attempt by national governments to foster technological development domestically. (a) the global exploitation of technology, (b) global technological collaboration and (c) the global generation of technology.

Keywords: Globalization, Technologies, Economic globalization, Transport globalization warfare

I. INTRODUCTION

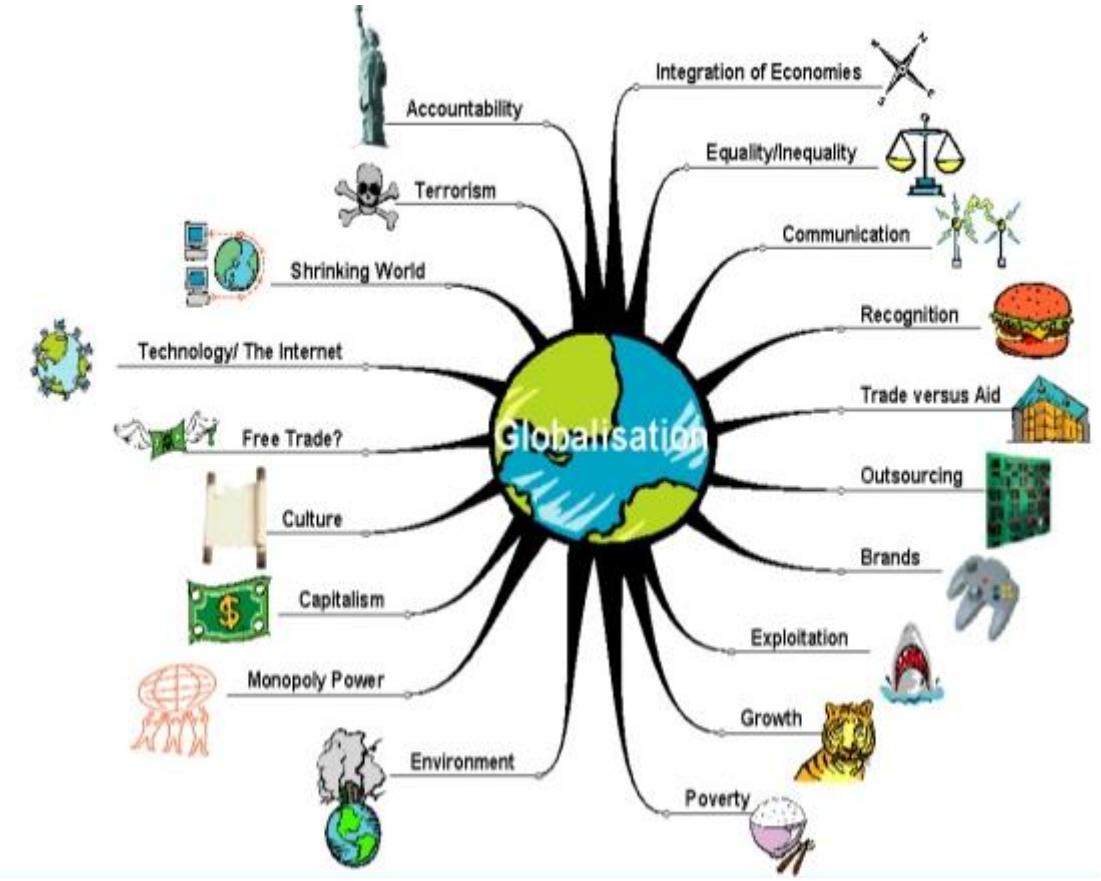
Technological developments are conceived as the main facilitator and driving force of most of the globalization processes. Before elaborating on the consequences of several technological developments, we must go through the definition of technology as a sociological term, so that we can further explore the social and political role of technology in the globalization process. Technology can be defined as the socialized knowledge of producing goods and services. We can describe the term technology with five important elements: production, knowledge, instruments, possession and change. Our definition of technology as a socialized knowledge can be better conceived with these elements.

The effects of technology breakthroughs on globalization are creating immense transformations in the way corporations and industries organize their production, trade goods, invest capital, and develop new products, services, and processes. Specifically, advances in information technology and information systems have become a key component in the most U.S. industries global business strategies with the capability to communicate and process information in a digital form. Any successful global business is going to have exceptional information technology and information systems to enable the world, and their company, to be more interconnected. This technology includes computers, mobile phones, hardware, software, and artificial intelligence. They provide the means to access information systems of other countries to easily communicate while also increasing a business' ability to collect data and pursue their economic potential.

II. TECHNOLOGY INFORMATION AND COMMUNICATION

Technological information and communication technology have changed our way of life, whether it is at home, at work, at school or at leisure. The internet and the development of digital technology (computer). The internet is essentially a network of computers across the world which is linked through global telecommunications. Although it was originally only used by defence personnel in the united states, easy access to computers and related technology have made using the internet a common activity in more recent time the world wide web (www) is a collection of interconnected documents which are accessible using the internet. it enables people from almost anywhere in the world to access information on almost any topic from shopping to weather forecasts; and from research to downloading music and movies.

III. ECONOMIC GLOBALIZATION



Economic globalization is one of the three main dimensions of globalization commonly found in academic literature, with the two other being political globalization and cultural globalization, as well as the general term of globalization .Economic globalization refers to the free movement of goods, capital, services, technology and information. It is the increasing economic integration and interdependence of national, regional, and local

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economies across the world through an intensification of cross-border movement of goods, services, technologies and capital. Where as globalization is a broad set of processes concerning multiple networks of economic, political, and cultural interchange, contemporary economic globalization is propelled by the rapid growing significance of information in all types of productive activities and market globalization, and by developments in science and technology. While globalization has radically increased incomes and economic growth in developing countries and lowered consumer prices in developed countries, it also changes the power balance between developing and developed countries and affects the culture of each affected country. And the shifting location of goods production has caused many jobs to cross borders, requiring some workers in developed countries to change careers.

IV. TRANSPORT TECHNOLOGY

Developments in transport technology have played a major role in globalisation. Over 100 years ago, the industrial revolution changed the nature of transport with the invention of the steam engine and the combustion engine. Since then, technological development in the transportation industry has affected transformation in road, rail, sea and air travel. Transport for personal use has improved dramatically. Cars are now built to be faster, safer, more fuel efficient and therefore cheaper to run, as well as being more environmentally friendly and costing less to purchase. Airline transport has also enabled the expansion of tourism and trade across continents. Although passenger planes only began to move groups of people around half a century ago, they have dramatically improved within that time. Airline travel has not only become. More affordable in the last 20 Years but it has also become faster. In the mid-1930s, eleven people could fit into an aircraft on a flight from London to Bangkok which took eight days. In 2002 almost 400 passengers could take the same journey in just ten hours.

V. TECHNOLOGY IN WARFARE - WWI & WWII

Technological innovations during the first half of the 20th century were numerous, helping to shape the methods by which the two largest wars in history were waged. It has been began to see brilliance in the creations of highly sophisticated technology such as radars and jammers, as well as experimentation with nuclear energy that offered myriad of possibilities for positive use in the civilian world. In addition, these advancements coincided with applications in the world of warfare that could be used for great harm and casualties.

This section will begin to cover how technology has altered the face of war, and how developments in such technology have changed the means by which wars are waged over the course of the 20th and 21st centuries.

There have been numerous advancements that were seen on the battlefield in the form of arms, transportation, and air power. In this section we will trace the origins of technological inventions that have direct impacts not only on the battlefield, but for those who may be operating on a remote computer thousands of miles away from a combat arena.

These technologies are increasingly impersonal, as countries are waging war via proxies and remote controlled weaponry.

This section will help bring to light the technological advancements made during eras of heightened global conflict such as the timeframe spanning the two World Wars (1900-1950), as well as modern warfare crises (1960-Present).

The strategic and technical uses of these inventions will be examined concurrently with the moral and ethical hazards that are faced in the ever changing field of warfare technology

VI. WEAPONS OF MASS DESTRUCTION

Atomic Bomb-Commonly referred to as weapons of mass destruction (WMDs), nuclear weapons have been at the forefront of international relations policy debates for many decades, with many questioning the morality of using such technology to cause indiscriminate harm. Only two nuclear weapons have been used throughout the history of warfare, both by the United States near the end of World War II. In 1942, the United States began the 'Manhattan Project', to create the first atomic bomb. With the help of

theoretical physicist J. Robert Oppenheimer, known as the 'father of the atomic bomb', the United States crafted two bombs, "Little Boy" and "Fat Man", which would be used to decimate the Japanese cities of Hiroshima and Nagasaki in

August 1945.

"Little Boy"- Dropped on Hiroshima on August 6, 1945, this weapon obtains its explosive power through the nuclear fission of uranium-235. Designed as a 'gun type' fission weapon, when the 'bullet' hit the target an immense amount of energy and heat radiation is released, decimating its immediate surroundings. The temperature of the center of the fireball at the moment of detonation is more than one million degrees Celsius. It

is estimated that approximately 140,000 people died by the end of December 1945, due to the use of this weapon (Damage From the Atmoic Bombing).

"Fat Man"-Dropped on Nagasaki August 9, 1945, this weapon functioned as an 'implosion

- Type weapon, with plutonium-239 as its base core. Thirty-two detonators were placed inside of a hollow sphere Of explosives to cause a powerful inward pressure, resulting in initiation. It is estimated that approximately 80,000 people died by the end of December 1945, due to the use of this weapon (Hiroshima and Nagasaki Death Toll, 2007).

On August 15, 1945, less than one week after the bombing of Nagasaki, the Emperor Hirohito of Japan issued a radio address to the nation, declaring the surrender of Japan. There is often much debate as to whether the use of such weapons of destruction was truly necessary to compel the Japanese to surrender. The moral dilemma of using a weapon of such indiscriminate brutality is thought to have weighed heavily on then President Harry S. Truman's mind, however, when he reflected upon later in life still came to the same decision, stating "I knew what I was doing when I stopped the war ... I have no regrets and, under the same circumstances, I would do it again" (Truman, 1963). With these instances being the only time nuclear weapons have ever been used in the, it is hidtory of warfarecategorically necessary to include them in the section depicting warfare technology of World War II, however, the threat of use of nuclear weapons still remains today, and is a continual discussion in the realm of International policits.

V. ARGUMENTS IN FAVOUR OF GLOBALISATION

1. That the economies of countries that are more engaged with the global economy have consistently grown much faster than those that have maintained closed economies –on average by about 2.5 percent.

2. Faster economic growth usually leads to increases in peoples' living standards.

3. Improved wealth leads to better health care and cleaner water, increasing peoples' life expectancy.

4. Increased foreign direct investment in countries due to the reduction in investment barriers has also fuelled growth.

5. Globalisation has resulted in improved environmental awareness as the internet has increased access to information.

6. Increased trade integration has reduced the threat of war and promoted peace.

7. Improved technology has reduced costs and changed the way the world communicates –adult illiteracy rates are falling in developing countries.

8. Modern communications and the global spread of information have led to the toppling of undemocratic regimes.

9. Multinational companies have adopted improved standards for workplaces and wages –usually paying more than local companies in developing countries.

10. International migration has led to greater recognition of diversity and respect for cultural identities, which is improving democracy and access to human rights.

VI. ARGUMENTS AGAINST GLOBALISATION

1. There are social and economic costs of globalisation –uncompetitive companies are more exposed and this causes people to suffer hardship.
2. Countries unable to take advantage of globalisation fall further behind.
3. Increased trade and travel have increased the spread of human, animal and plant diseases, like AIDS.
4. Increased interdependence of countries has greater vulnerability to economic problems –like the recent global recession.
5. The environment has been harmed as industries have exploited inadequate environmental codes in developing countries.
6. Major economic powers control the international economic bodies which can mean decisions made there are not in the interests of the developing world. The level of agricultural protection by rich countries has been estimated to be five times what they provide in aid to developing countries.
7. Trade liberalisation and technological improvements change economies and can lead to unemployment.
8. Modern communications have spread an awareness of the differences between countries and increased demand for migration to richer countries. Barriers to migration have been increased in richer countries leading to more people smuggling.

VII. CONCLUSION

Advances in the technology are producing many changes in our society at speeds that are hard to measure and quantify. The shifts within the job market, the rise of open source material, and the rethinking of firms will bring about new trends in business. More efficient ways to handle health care and education material will provide more access, flexibility, and coverage to all parties. Web 2.0 and the Internet Revolution will continue to lead the way so social networking, peer production projects and comprehensive news coverage will be streamlined to become an integral part of the expansion of communication across cultures. However, the rapid expansion of information and computer technology also bears certain costs. Workers in sectors such as agriculture and manufacturing are losing their jobs as innovations in IT create a greater demand for high-tech workers and introduce efficiencies that make manual labor obsolete. Furthermore, governmental programs do not provide the assistance needed to help these workers transition to the technological age, further wedging the gap between rural and urban America. This disparity is also magnified within the stratification of international systems: The digital divide that exists among developed and developing countries is obvious and the high cost of bringing broadband and technology to third-world countries is an issue that needs to besolved. As individuals become more engaged with the possibilities that Web 2.0 brings, censorship and the imprisonment of journalists in autocratic nations will become a larger and larger issue that should be addressed by the international community. Although information technology and increased knowledge can empower everyone on an individual

level, the limitations of the existing structures within the job market, socioeconomics, and governmental sovereignty are hard to cast away; an underlying irony has yet to be eliminated. If the new technologies are to fulfill their promise, it is necessary to direct attention towards the costs and concerns that come with the globalization of technology. Experience with previous technologies suggests that prudent policies can help us effectively manage the risks associated with new technologies without harm to their benefits. History also advises that the measures taken must be developed through close consultation between governments, private sector experts, and stakeholders and citizens. We can partake in the ongoing debate by staying informed on current events, and technology facilitates the process in a vital way.

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