

SCIENCE, TECHNOLOGY, AND GLOBALIZATION: A RE-APPRAISAL IN THE PHILOSOPHY OF SCIENCE AND TECHNOLOGY

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Abstract

Every age has got its age-mark; the outstanding feature characteristic that defines that age. Our age, the 21st century, like the one before it, is defined by globalization. Historical philosophers or dialecticians, those who perceive an underlying logic in history, believe that no phase of life comes to a close until it has exhausted all its possibilities. It is obvious that globalization has not exhausted its possibilities. Globalization is still in progress. It is still the defining mark of our age. There is therefore the need to re-appraise it to raise fundamental philosophical questions about it; such questions as relate to the phenomenology of globalization; the philosophical foundations of globalization; the symbiotic and synergistic relationship between science and technology as the force driving globalization; and the cost-benefit analysis of globalization. It is only when these questions are philosophically re-appraised that we would hope to effectively function and contribute in our globalized world, a competitive, participators and interactive world. Since the Kernel of this paper is about re-appraising the symbiotic and synergistic relationship between science and technology as the motor driving globalization, our approach is that of the philosophy of science and technology.

Keywords: Globalization, *Technoscience*, Philosophy, Phenomenology, Profiteering

Introduction

Philosophers of science appropriate to themselves the task to raise and analyse “the philosophical and foundational problems that arise within science” (Curd & Psillos, 2014, p. xxiii). These include philosophical and foundational problems that arise reflecting on the nature of science, the

methodology of science and its application. The main thrust of this paper is on the application of science.

Philosophical and foundational problems about the application of science relate to the issues of science and technology and society. Here the philosopher of science tries to “reflect” on the nature of the subtle relationship between science and technology on the one hand and science-technology and society on the other.

Truly globalization is the definitional age-mark of our age, the 21st century, but it is fundamentally a reflection of the nature of the relationship between science, technology and society.

Every society and age has some science and some technology. This is certainly so since science and technology are said to have ontological origins. This is to say that for as far back as man existed, science and technology also existed no matter how rudimentary.

From inception, science and technology “developed an ever-increasing power of historical change” (Mason, 1962, p. 600). Thus we have science and technology age-marks on society forming epochs such as the Stone Age, the Bronze Age, the Middle Ages (including the Dark Age), the Age of Exploration, the Age of Reason. The Middle Age, particularly the Dark Age, for instance, is commonly taken to be a negative age-mark of science and technology upon society the period. However, that science and technology have power of socio-historical change should not be construed to mean that they constitute autonomous agents of socio-historical change. What is meant is that science and technology have a momentum of socio-historical change that is uniquely peculiar.

This power of socio-historical change became more phenomenal and unparalleled from the 20th century. Indeed science and technology from then became arguably the most important determinants of socio-historical change. Science and technology were able to acquire this power because from the 20th century, as the examples of nuclear physics and atomic bomb show during the Second World War; they fused into a symbiotic and synergistic hybrid that could best be described in the apt coinage, technoscience. This symbiotic and synergistic union of mutual benefits, stimulation and reinforcement, took science and technology to an unparalleled level of advancement, which wrought tremendous and dramatic changes (prospects and problems) in society. Kucera (2010) captures the prospects thus:

The world is more than ever connected through advanced technology. The Internet offers quick and easy access to any part of the world. The world is shrinking as we build better and better bridges that connect that expanse of lands and oceans. This is a wonderful thing and certainly it has benefited many. I can send an E-mail in minutes and get a response in hours or days rather than

waiting weeks for a letter through the mail. Yes... technology has advanced the ability for people to connect and this is good.

Consequently there is an increasing sense of interconnectivity, universal brotherhood, interrelatedness and interdependence of individuals, societies and nations. There is a feeling of reciprocity of influence between the different societies and regions of the world, resulting from the compression of space and time by the advancements in science and technology. This is the current age-mark, a new-world-order, a new world culture and it is called globalization.

Technoscience: This is the apt term to define the kind of relationship that exists between science and technology today. The relationship between science and technology has been a long and evolutionary one. The history of the philosophy of science and technology records three discernable types of this relationship. In the ancient world there was *theoria-technè* separation; science and technology maintained parallel developments. The ancient Egyptians and Greeks could not understand how theory could aid the development of craft or vice versa. Confirming this view Plato writes, “any meddling of one with another, or the change of one into another, is the greatest harm to the state, and may be most justly termed evil-doing” (Plato, 1968. P.168). Theory was the business of the scholars while *technè* was the concern of the craftsmen. *Technè* was passed on from craftsman to craftsman through apprenticeship. However, it ought to be noted that it is in general terms that we say there was no *theoria-technè* contact among the ancients. This should not be understood to mean that there were no isolated instances of *theoria-technè* contact as in Aristotle’s investigations in Natural History.

Theory and technique began to make some contact beginning from the medieval period and reaching its height in the modern period. As the instance of the Second Industrial Revolution (1850 –1914) demonstrates, science was able to positively and directly stimulate technical innovations. Relating the nature of science-technology relationship during this period, Bunge (1974) writes:

Ever since theoretical mechanics began, in the eighteenth century, to shape industrial machinery, scientific ideas have been the main motor and technology their beneficiary. Since then, intellectual curiosity has been the source of most, and certainly of all important scientific problems; technology has often followed in the wake of pure research with a decreasing time lag between the two (29).

During the modern period therefore, science and technology started making some contact, with, science leading the way, illuminating and stimulating technology, which follows as a corollary. But it could not be said there was complete science-technology interpenetration at this time. The

fashion of defining technology as “applied science” is a vestige of the modern period.

From the 20th century, specifically from the second half of that century, as the example of the production of nuclear bomb demonstrates during the Second World War, science and technology so much converged and interpenetrated each other that they formed a logical matrix which cannot easily be separated except perhaps for the purpose of arbitrary conceptual analysis. It is no more possible to clearly separate science and technology. They are now involved in a symbiotic and synergistic relationship and the result is a hybrid enterprise best defined as *technoscience*. In this hybrid union, science and technology mutually benefit, stimulate and re-enforce each other; and the result is the generation of species of scientific and technological innovations unprecedented and unparalleled in the history of the march of civilization; such innovations as information communication technology (ICT), digitization, and Internet. These species of scientific and technological innovation generated by *technoscience* has drastically compressed space and time making the world a global village. *Technoscience* is the fusion of two areas of engagement (science and technology) heretofore autonomous. Since in *technoscience* science and technology mutually stimulate and reinforce each other, it becomes inappropriate to continue to define technology as “applied science.”

Globalization: Philosophy and Phenomenology

Globalization is a manifold concept for a set of processes. Accordingly, it has been given a lot of working definitions. Giddens (1990) defines it as the “intensification of worldwide social relations which link distant localities in a way that local happenings are shaped by events occurring many miles away and vice versa” (p.64). Also Globalization is defined as “...the sense of increasing interdependence among people, nations, businesses, economies and markets, which has brought a serious change in social interactions and relations” (John Paul II, 2002, p. 10). From the definitions given above, we glean that globalization is a set of processes seeking to propagate worldwide paradigms in social, economic, cultural, political, religious, military and demographic dynamics made possible through the compression of space and time by current advances in science and technology. We glean that globalization is a complex multidimensional phenomenon. Its phenomenology discloses some of its thematic dimensions to include, the economic, cultural political and the demographic. Let us analyze each bearing in mind Hollenbeck’s (2002) caveat that globalization “cannot be reduced to a single analysis such as the economic without distorting it in ways that will lead to serious misunderstanding” (p.214).

Economic globalization is the liberalization of world commodity and financial markets. This means the dismantling of national barriers so as to foster increased openness of national and state economies to international trade, financial flows, and direct foreign investment. Economic globalization derives from the principle of the free market. According to this principle, the free flow of commodity and finance worldwide should not be regulated by any other forces except the market forces – the law of demand and supply. The proponents of the free market operation believe that “free from the oppressive hand of public regulations, market forces will cause the world’s great corporations to bring prosperity ... to all the world” (Korten, 1999, p.37). The free market is itself based upon the “... belief that government regulation inhibits and distorts the efficient working of the market; and a belief that government programs are inherently inefficient, breed dependency, and reduce individual responsibility, initiative, and choice” (Obama, 2006, p.147). In the regime of free market, the diminishing regulatory power of the state and governments is superseded by the increasing power of Multi-National Corporations, the World Bank, the International Monetary Fund, and the World Trade Organization (WTO) to forge economic policies. The key economic planks in economic globalization are liberalization, deregulation, denationalization, individual free enterprise or entrepreneurship or competitiveness, and profit – making. It is believed by advocates of this policy that an economic regime based upon such principles would release the initiative, creativity, and the productive energy of the people bringing about prosperity. In real terms, economic globalization means the overthrow of the traditional forms of pre-World-Wars ways of economic organization: the welfarism of the developed capitalist West, the planned economy of the former communist blocs and the nationalization or modernization of the economies of most developing countries.

Globalization of Culture, a critical dimension of the globalization matrix, is the denationalization of values, ideas, forms, ethnic folk motifs, lifestyles, ideas, meanings, images, and sounds. This is exemplified by the globalization of the culture of jean-wearing, mobile phone use, pop music, e-communication, and fast-food fashion. Globalization of culture is the immediate consequence of the rise in mass tourism, increased migration, commercialization of cultural products, and the spread of the idea of consumerism. These play together to bring about the meeting and merging of different local cultures. Globalization of culture implies that there is in the making a world-culture or a universal cultural pool to which local cultures are contributing.

Political Globalization: This is the process of enunciating, propagating, and legislating global paradigms on political issues, especially of international concern. This implies the breakdown of national sovereignty

through the integration of sovereign states into a political bloc. It involves the organization or formalization of political activities across the boundaries of nation-states. Political globalization is responsible for the emergence of such regional and intercontinental bodies as the United Nations, the African Union, and the European Union. These bodies assume governance in transnational issues such as democracy, human rights, ecology, and justice.

Demographic globalization: This means migration across national boundaries. It means the accentuated and largely uninhibited international movement of people. Schuman (2009, April 27), cites UN source that “the number of migrants working outside their native countries worldwide rose from about 162 million in the mid 1990s to about 200 million last year”, 2008. This implies that international migration which he observes accentuated during the opening years of the 21st century is essentially a phenomenon of globalization. He also observes that demographic globalization has caused “shifts” in the demographic configuration of societies all over the world. The composition and size of societies all over the world are changing as a result of globalization. This shift in demographic configuration impacts nearly all aspects of the life of the societies of the world.

From the foregoing analysis of its thematic dimensions, we deduce the following essences of globalization. Globalization is the deletion of borders and international barriers in the sense of overcoming constraints and difficulties in all spheres of interaction: economics, culture, politics, demography, geography, sociology, and even religion. Hence globalization is a social process; a social process in which the elimination of the constraints of space and time fosters universal brotherhood, fellowship, solidarity, pluralism, unity in diversity, ecumenism, compassion, and inclusive humanism; by eradicating xenophobia, racism, nationalism, ethnicism, and tribalism. Globalization creates unparalleled opportunity for competitiveness and upward mobility for everyone. Analyzing the phenomenology of globalization John Paul 11 (2002, April 24) writes: “This phenomenon also makes it possible to break down barriers between cultures and offers people an opportunity to meet and learn about one another. At the same time, it obliges national leaders and people of goodwill to do their utmost to ensure that what is proper to individuals and cultures is respected, to guarantee the good of persons and nations, and to practice brotherhood and solidarity” (p.2).

Having described and analyzed and laid bare the true meaning of globalization, which is what phenomenology is; let us articulate the philosophy upon which it is founded. This will help to further uncover the true meaning of globalization. Globalization is based on the philosophical principle that the whole world and all that is therein belong to all in common.

John Paul 11 (2005) calls this “the principle of the universal destination of goods” (p. 726). This is the principle that all humanity has a common destiny inextricably tied to the living systems of the earth. Locke (1993) clearly articulates this philosophy thus “The earth and all that is therein is given to men for the support and comfort of their being. And though all the fruits it naturally produces, and beasts it feeds, belong to mankind in common ...” (p. 274). The 17th century English metaphysical poet and cleric, Donne (2015), in Meditation XVII, the most famous of his prose, penned down memorable excerpts expressive of the common humanity of mankind. He wrote: “all mankind is of one author and of one volume,” “No man is an island, entire of itself; every man is a piece of the continent, a part of the main.” The philosophical principle upon which globalization is based asserts that there is a deep sense of relatedness, interrelatedness, and interconnectivity of everything that lives and moves in the natural world. There is the interdependence of the whole cosmos. The world is an inseparable whole. Human life anywhere is sustained by the interconnectedness of existence everywhere. Globalization is based upon this philosophy of the relatedness and interrelatedness of human beings in society. Human beings are interconnected to and interdependent on one another. This means that isolated; individuals, societies, and nations do not have meaning. It is against the backdrop of this philosophical principle that the metaphoric usage “global village” as a description of the current world-order has meaning.

Globalization is *Technoscience* – Driven: The earliest civilization, due mainly to the absence of *technoscience*, had little or no contact one with another and consequently developed independently. As technology advanced, however, aiding and enhancing communication, transportation and the growth of the knowledge of other peoples, the tendency towards globalization started to manifest. Some of the forerunners of globalization are Hellenism, the Roman Empire, The Church, and philosophies with universal tendencies. Hellenism is the influence of the ancient Greek ideas that spread to the then known world of Asia, Syria and Egypt. A typical example was the practice of moving from *polis* of the Greek city-states to *cosmopolis*. The Romans through conquest built an empire in the 100s A.d. that encompassed most of Europe, some parts of Middle East and Egypt. The *Pax Romana*, a period of relative peace which lasted for about 200 years, was extended to all parts of the empire. The Church, imbibed most of Greeco-Roman culture and during the Middle Ages proclaimed universal tenets such as the paternity of the Godhead and the brotherhood of man. The word *catholic* used to qualify the Church has *universal* significance. There were philosophies with universal imports which foreshadowed globalization. The philosophies of Kant, Hegel, and Marx have universal significance and

in so doing anticipated globalization. Advancements in technology: the advent of printing, the invention of the magnetic compass and the stern post rudder, the invention of steam engines, and the mechanization of industry, made possible the discovery of new worlds and the spread in much of the world of Western European customs, skills and ideas. These had direct bearing in the internationalization of trade and greater interconnectivity and interdependence of continents and nations – veritable direct forerunners of globalization.

The aforementioned global tendencies notwithstanding, globalization as we know it today is a novelty. It was directly made possible largely by unparallel developments in science and non-linear media technology in the second half of the 20th century. During that period, science and technology fused in a symbiotic and synergistic union; a hybrid called *technoscience*, a union of mutual stimulation and reinforcement, of science and technology. This union generated species of innovative technologies in transportation, information and communication. The convergence of information technology and communication (Internet, Satellites) technologies (ICT) wrought a digital revolution. Digital revolution radically changed the structures of society by introducing a new culture – the cyber culture, the novel culture of electronically transmitted codes or immaterial (virtual) means of communication, in addition to already existent electronic mass media – radio and television. In this new culture, the traditional space and place dimensions, which were physical, turned virtual or immaterial. Even the traditional conception of the human person as made up of physical body and spiritual soul is being supplanted by a virtual conception of the human person. Indeed, the Internet has made virtual all reality. The electronic operation of various aspects of human endeavor such as e-banking, e-commerce and e-payment has radically changed the dynamics of social, economic, cultural, educational and religious interactions. The net effect of all these is time-space compression, the leveling of the barriers between countries and continents, the contraction of the world into a phenomenon which Marshal McLuhan in 1960 described as “global village”, characterized by the intensification of interaction which links countries and continents in such a way that local happenings are shaped by global events and vice versa; characterized by global interdependence, interconnectedness and exchange. This phenomenon is what is called globalization.

Cost-Benefit Analysis of Globalization: Advocates and enthusiasts of globalization are apt to enumerate its benefits. They adduce that globalization is pro-world. This implies that it is a world process of formulating and implementing policies that would benefit the peoples of the world as a whole. In this world-process, sovereign nations freely join together and determine equally the course of humanity. It is a world process

at the service of man, the totality of man: his material, spiritual, moral, intellectual, religious as well as social life. It is a process of promoting compassion for all and solidarity one with another. It is a process of building a human family, an inclusive society, a world devoid of marginalization and exclusion and discrimination of any type. Consequently, globalization presents individuals and nations with the opportunity for self-realization, self-fulfillment and full maturity.

Supporters of globalization point out that it promotes the diffusion of knowledge. They explain that there is a synergistic relationship between globalization and information and communications technologies (ICT). ICT drives globalization while globalization stimulates the advancement and expansion of ICT. Individuals in every nook and cranny of the globe acquire their own private websites and computers. In like manner cybercafés are found at every street corner and turn in towns and cities. It is now easy to surf the Internet, which has made possible virtual libraries. The virtual libraries have in turn made available and accessible, in digital formats or e-books to developing nations, millions of physical books and collections in developed countries, which would have been out of reach as a result of the physical barrier of geography. The Internet has also made possible education and learning through the Virtual University Enterprise (VUE). Through this platform, anybody who enrolls can receive lectures and get a certificate through the Internet. Through this way, ICT promotes the dissemination of information and diffusion of knowledge. Akaeze (2009) quotes Amadi as saying:

It is in our day and age much more possible than ever, to keep informed and

in the know about the newest discovery and the most recent scientific innovation. It is relatively easier in our time to keep abreast of cutting edge research in any field that one fancies. Put simply, never has knowledge been

more accessible or information more abundantly within reach than it is today, thanks to information and communication technology, ICT and the World Wide Web (p.28).

The diffusion of knowledge consequent upon globalization has ripple effect. Always, the dispelling of ignorance has inverse relations with the expansion of freedom. Thus, as knowledge increases with globalization certain forms of freedom also expand. Thence globalization brings about freedom from the gripe of fear, especially xenophobia, and a departure from negative ethnocentrism and nationalism and leads towards xenophile and universal, cosmopolitan or global consciousness. In general terms, globalization liberates.

Corollary, globalization provides and promotes human rights. Human rights are provided for and guaranteed by international laws, conventions, covenants, treaties, charters and declarations of the United Nations and regional bodies. By spreading information on these international laws and conventions on human rights and strategies for securing them, globalization promotes human rights. Often transparency, accountability and respect for human rights are conditions for admittance into the global market. With these requirements, it becomes difficult for repressive governments to continue the rape and abuse of the human rights of their people.

An often cited benefit of globalization by its theorists is that it stimulates prosperity and increases standard of living. It accomplishes this by the production of more and better goods and services. Economic growth is believed to be a sure goal of liberal capitalism, the propelling ideology of globalization. Akintunde (2008, Dec. 15) cites a recent study by Nordberg that confirms this. The study “attributes the phenomenal growth in the economies of some Western and South Asian countries to the adoption of capitalism and open market as an economic principle” (60). The core principle of liberal capitalism is free market operation. The mechanism of free market is that market forces: the self-interest or desire for profit or profit-motive, demand and supply, regulated by competition, ensure that individuals and private firms produce goods and services that consumers are willing and able to buy. Prices fall when supply exceeds demand and rise when demand exceeds supply. The free operation of the market generates social order and expands production without any conscious regulation, “as if by invisible hand”.

The liberal capitalist ideology was first enunciated in the 1700s by Adam Smith, a Scottish economist. Since its formulation, the liberal ideology has witnessed changes. Basically, liberals hold as inviolable the following tenets: right of individual freedom, equality and opportunity; right to private property; freedom of choice as to how individuals should earn and spend their income. Liberals also believe what society needs to grow economically and to achieve social harmony is the competitive pursuit of the self-interest of individuals. The competitive pursuit of the self-interest of individuals would release their productive energy, initiative and creativity. It will also make them efficient and thereby generate prosperity. Also liberals hold the “...belief that government regulation inhibits and distorts the efficient working of the market; and a belief that government entitlement programs are inherently inefficient, breed dependency, and reduce individual responsibility, initiative, and choice” (Obama, 2006, p.147).

The argument among the different shades of liberals today is to determine the extent of government’s involvement in the economy. There are shades of liberals who still believe in the classical *laissez fair* (non-

interference) principle: that the economy is self-regulating if left alone to operate according to its own rules; that government regulation is unnecessary except perhaps to act as umpire to ensure that individuals play according to the rules. This shade of liberals is today called conservatives or reactionaries. The administrations of Margaret Thatcher, Ronald Reagan, George H. Bush and George W. Bush are typical conservatives. For instance, Reagan was quoted as saying: “Government is not the solution to our problem, government is the problem” (Obama, 2006, p.147). There are shades of liberals who believe that government action is necessary to provide condition of “freedom of opportunity” for all individuals to realize their potentials, to actively regulate the economy in the public interest; these are called liberals. The administration of Barack Obama is perceived in this light. There are those who hold that there should be less government regulation of the economy; these are called neo-liberals. Because the neo-liberal globalized society of today promises prosperity and other gains such as individual freedom, democracy, transparency, equal opportunity and so on, it is presented to developing countries of Africa, Asia and Latin America as an inevitable socio-economic ideology, especially as the communist centrally planned economic system has collapsed.

On top of the economic growth benefit which globalization ensures is the alleviation of poverty and hunger and malnutrition. Poverty is a knotty concept. It is easier to point at than to define. But for the sake of the standardization of conversation, poverty is defined as “living on an income of below one dollar a day...” (Williams, 2004, p.60). Poverty and hunger correlate in a vicious circle. Poverty is a cause and a consequence of hunger. “Hunger is the inability to acquire or consume an adequate quality of food in socially acceptable ways or the uncertainty of being able to do so” (CFBCC, 2005). To be included in the complicated idea of hunger is the issue of micronutrient malnutrition, the “hidden hunger”, the hunger that escapes notice because it does not manifest in miserable physical signs. In this type of hunger, the organs of the body stop functioning properly because they are starved of adequate nutrients. When hunger persists, starvation sets in, energy begins to sap, health starts failing, and finally death occurs.

As a way of acknowledging the evil nature of hunger and working to avert it, the right to food was categorized as a human right in the Universal Declaration of Human Rights (UDHR) and the International Covenant on Economic, Social and Cultural Rights. Consequently, the World Food Conference of 1974, convened under the auspices of the United Nations General Assembly adopted the declaration that “every man, woman and child has an inalienable right to be free from hunger and malnutrition in order to develop fully and maintain their physical and mental faculties” (Tomasevski, 1987, p.5).

Food shortage is caused by two sets of factors: man-made and natural disasters. The man-made disasters such as conflicts, dictatorships, repressive regimes, corruption, bad governance; illiteracy and imperialism, could be avoided. Some natural disasters are avoidable, others are not. By its ideology of neo-liberalism, open-market, democracy, capacity building and economic growth, globalization averts disasters that cause food-shortage. In doing this, it ensures food security and thus alleviates hunger and reduces poverty. Akintunde (2008) reviewing Norbergs recent book confirms that because of globalization and its ideology of neo-liberal capitalism which it spreads all over the world, poverty world-over has reduced in the last 50 years than it did in the preceding 500 years. Also the number of hungry people world-over has fallen drastically (p. 60). Illiteracy has also minimized.

Globalization expands world trade. It does this through its insistence on deregulation and privatization. Trade is important for the free flow of finance as it is for goods and services. It is also important for global investment and labour. It is good for the creation of employment opportunities and the development of the respective participating countries. Commerce is also necessary for the free flow of required facilities and technologies and equipment needed for development.

Developing countries depend on trade to build up a large part of their national income. Consequently, programmes and platforms have been put in place to strengthen their trade capacities and maximize the profits that ensue from them. In 1998 for instance, the UNDP in partnership with United Nations Conference on Trade and Development (UNCTAD) launched a programme called Globalization, Liberalization, and Sustainable Human Development. This programme was put in place to strengthen the trade development of least developed countries so that they could follow up the World Trade Organizations guidelines on trade. In 2004/2005 also, the UNDP launched a 10 million dollar programme called Trade Africa. The objective was to assist African countries correctly analyze trade issues and improve their bargaining power in World Trade Organization and be able to articulate beneficial home-grown policies on trade.

A significant benefit of globalization is the globalization of culture. Globalization of culture is the hybridization of many types of cultural forms, folk motifs, human values, and cultural identities. Globalization of culture is about cultures meeting and learning about themselves and about possible merging of many cultural identities. Globalization of culture implies creative dialogue or cultural ecumenism between many types of cultural identities for possible breakdown of barriers between them and eventual cultural exchange. John Paul II calls this global culture “a living culture”; a culture that fosters compassion and brotherhood; a culture that guarantees the good

of nations and persons, and ensures that what is proper to individuals and cultures are respected for the full maturity of their cultural identities.

The Costs/Challenges of Globalization

It is the paradox of globalization that for every benefit which it confers, there is a cost or a challenge posed. The first challenge of globalization is the **conceptual challenge**. Globalization is conceived in different ways by different peoples. Some people understand it to mean integration; others understand it to mean interdependence. Held et al (1999), notes that while interdependence assumes symmetrical power relations, a relationship of equality; globalization in practice today is asymmetrical, assuming hierarchy and stratification. Integration suggests ‘unification’ and ‘sense of community’ and shared fortunes and shared institutions of governance’. Globalization in practice does not show any of those. Also in practice globalization is not the same with ‘universalism’. In globalization, all peoples are not equally interconnected or in harmony (p.28). The conceptual challenge of globalization is to enunciate a univocal conception of it. Until this is done, the process is open to divers interpretations and open to be hijacked and shaped according to the whims and fancies of the strong and the influential.

Cultural Challenge: The beauty and richness of the world derives from its multi-cultural identity or pluriformity. Globalization of culture, therefore, poses the challenge of homogenization of cultural values. Often globalization is variously referred to as “Turbo-capitalism”, “Westernization”, “Americanization”. “Thatcherism”, “Reaganomics” or “Cosmocorporationalism”. These aliases of globalization suggest that the world is inexorably moving towards a homogeneity or unification of human cultures with the Western World, especially the United States, as the model. What this implies is that the cultural specifications of many cultures are being steadily erased; that the local is being supplanted by the global (Western); that the world of the pluralism of cultures is being substituted with the world of monoculture. This push towards global uniformity breeds conformity and destroys the creative and healthy tension between cultural identities. In homogenization of culture, there is the hegemony or the cultural enslavement of the developing countries by the developed countries of the West. The overall consequences are that the world is denied the advantages that accrue from unity in diversity and the opportunity of rich and diverse perception and interpretation of reality.

Economic Challenges: Protagonists of globalization propound that it stimulates economic growth and in so doing generates prosperity. Antagonists counter that globalization produces a “winner-take-all economy, in which a rising tide doesn’t necessarily lift all boats” (Obama, 2006,

p.146). This implies that globalization poses the challenge of economic marginalization of some groups within an economic and some economies within the global economic structure. How does this come about? According to Amin (2003), developed countries are integrated into the global economy in an auto-centered (inward-looking) but not in an autarkic (closed) manner; while developing countries are integrated in an open manner. This means that while developed countries are simultaneously inward-looking and aggressively open, developing countries are simply open without being inward-looking. The implication is an asymmetrical relationship between the developed countries at the centre and developing countries at the periphery of the global economic structure. In simple terms, this means that while the developed countries, using the agents of globalization: UNO, IMF, WB, shape the global economic structure; the developing countries passively adjust to it.

Within the level of an economy, globalization can cause economic marginalization if left to run freely on its course unregulated. The global economy is a knowledge-based economy. Consequently, the knowledge-class: engineers, lawyers, consultants, skilled and talented workers rake in a lot of money and are capable of buying anything of their choice in the open market. The other class which does not possess the requisite knowledge, the class that has its job automated, digitalized, or out-sourced; make little money from service and low-pay jobs. Thus globalization engenders stratification, marginalization and exclusionism within an economy and in the global economic structure.

The Challenge of Poverty: Marginalization means that while certain individuals, groups and countries waft in affluence, an increasing number of others marinate in poverty. In globalization, the rich get richer, the poor get poorer. Technically, absolute poverty is living in an income of less than \$1 a day. Practically, absolute poverty is the inability to have those basic needs that define decent life such as food, cloth, shelter and basic health-care. Poverty is the Pandora Box from which other evils issue; such woes as hunger, wars, lack of resources to invest in education, infrastructure, manufacturing and agriculture. Also poverty is the circumstance for the denial of certain basic freedoms: freedom from fear, freedom of speech, freedom of association, and freedom of worship.

The viciousness of poverty is such that the poor cannot on their own break the structural constraints that keep them in poverty. For instance, poor countries cannot on their own overcome the tariffs that tip the balance of trade in their disfavor. They cannot also overcome the patents that put certain technologies beyond their reach. Overall, poverty weakens the poor rendering them impotent to compete in the very competitive global marketplace.

The Challenge of Profiteering: Globalization stimulates economic growth at the cost of being essentially profiteering. This means that the overriding purpose of the much proclaimed economic growth in globalization is profit-making. Globalization is founded on the liberalists' principles that free market; competition, and profit-making; are the factors that play together to bring about the efficient condition of wealth creation. Thus in globalization, profit is paramount and absolutely emphasized because it is perceived as a sign of efficiency and incentive for creativity, enterprise and innovation. Perceived thus, profit-making becomes profiteering: profit-making that is extortionist, exorbitant and unjust. In such a situation, individuals find themselves engaged in fierce rivalry one with another. Economic relations are consequently reduced to the Hobbesian State of "war of all against all", a kind of Social Darwinism, "a culture of death" according to John Paul II, a rat-race, a survival of the fittest; a jungle complex where everyone is working hard to undo everyone. In such a situation, there are aggression, alienation, depersonalization, and man's inhumanity to man because production rather than be directed towards the service of the whole man, his spiritual and material aspects, is directed towards profit. In such a situation, even man is vendible for the sake of profit; there is nothing sacred and there is nothing off limit. In such a culture of consumerism, where everything is vendible, nations, ethnic groups, terror gangs, and militants are induced to engage in brigandage so that anything at all (man, nuclear weapons, environment, pornography) could be sold or exploited and profit could be made. The re-conceptualization of the "market" to mean competition and profit-making by Capitalism and the accentuation of this re-conceptualization by globalization cause estrangement and alienation. Before both, the concept of the market did not denote profit and competition. Bruni (2002) writes that the concept of the market in Europe has not always suggested competition. Market functioned as a place of "encounter among people even when politics or religion were causes of conflict" (247).

In Africa today, in spite of the assaults of globalization, the concept of the market as rendezvous or communion still lingers. Hence, in Europe and Africa, the traditional concept of the market essentially included communion not just competition and profit-making and wealth creation. The re-conceptualization of the market as a place of competition and profit-making by capitalism and globalization cause alienation. Karl Marx pointed out many spheres of alienation such as religion, philosophy, and politics. But because he considered economic activity the essential activity of man through which he re-creates himself, he considered economic alienation the fundamental and the worst. He also indicated four aspects of economic alienation but generally according to him, "alienation occurs when man forfeits to someone or something what was essential to him" (McLellan,

1980, p.118). In globalization, man is alienated because he forfeits to completion and profit what ought to be due to him in the production of wealth. Also the profit which is made in globalization is forfeited by man to the mega corporations – the agents of globalization.

Conclusion

The objective this paper set out to accomplish is to do a critical appraisal of globalization using the analytic instrument of philosophy. I believe that we have done justice to that objective. Adopting the approach of phenomenology, we exposed the *logos* of globalization: the essential and hidden meaning behind the outward manifestations. We have seen, so to say, the two sides of the coin; the theory and practice of globalization. We have seen the philosophical principle upon which globalization is founded. We saw that globalization is based on the philosophical “principle of the universal destination of good”; that is, that “all humanity has a common destiny inextricably tied to the living systems of the earth”; that the whole world and all that is therein belong to mankind in common. We saw that globalization is a process not a goal. We outlined a miscellany of benefits which advocates proclaim accrue from globalization; such benefits as the stimulation of economic growth, generation of prosperity, alleviation of poverty, diffusion of knowledge and dispelling of ignorance, provision and promotion of human rights and certain kinds of freedom, fear for instance. We also noted that paradoxically that every benefit of globalization has on tow a cost or a challenge. For instance, the stimulation of economic growth brings with it the marginalization of certain groups within an economy and certain countries in the global economy. Also the centrality of the principles of competition and profit-making in globalization is said to be responsible for the estrangement and alienation of man in today’s world. The wars, militancy, terror attacks, modern slavery, irreplaceable exploitation and degradation of the environment are traceable to the pursuit of profit essential to globalization.

The question can now be raised, what is the purpose of this paper? There are two ways to understand purpose here. There is philosophy level purpose. The purpose of this paper at this level is knowledge, knowledge for knowledge sake. The purpose here is to contemplate and be one with the One, the Good, and the Truth. This is the lofty purpose of this paper; knowledge for knowledge sake.

There is however lower level purpose, the practical purpose. The knowledge or understanding which derives from this paper equips one to effectively and efficiently operate in the very competitive, knowledge-based process of globalization. This is the only way one can hope to lead a fulfilled life in today’s global world.

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