



Science in Society or Society in Science? A Menace Of Scientific Imperialism

Henry Ovwigho Ukavwe Ph.D.

Lecturer in Philosophy Department of General Studies
Plateau State University, Bokokos, Plateau State, Nigeria Tel: +2347066958110

Received 17 July, 2014; Accepted 28 July, 2014 © The author(s) 2014. Published with open access at www.questjournals.org

ABSTRACT:- Science is one of the many inventions or phenomena in society just like religion, culture, and politics, among others. Thus, science is created, lodged, practiced and developed in society. In its earlier form, science began as inquiries into nature. But today, science has developed tremendously and the scientific practice dominates the society, partly because it is being practiced and developed within the framework of society, and especially because it has brought so much progress to society. Consequently, science mounts pressures on society as revolutionary influences subversive of the established order of things. This breeds the problem of science seeking to dominate in its relationship with social, political, religious, cultural and economic activities in society. Given the above, this paper wonders if science is in society or society is in science. It argues that science seems to have swallowed society such that society now lives in science. As such, it rejects science as it is currently conceived by arguing against the chauvinism of science. This paper, therefore, represents a struggle against scientific imperialism and it seeks to construct an argumentative validity for its claim that science has become imperialistic. To achieve this, the paper demonstrates the imperialism of science as evidence for its claim.

Keywords:- Belief-System, Hegemony, Ideology, Science, Scientific Imperialism, Society.

I. INTRODUCTION

A cursory look at the image and place of science in society raises the question: “What’s so great about science – what makes science preferable to other forms of life?”^[1] Today, science has gained a wider and universal acceptance, perhaps, due to its results. As such, faith in science as the ultimate arbiter of everything continues to increase. The universal stance of science, therefore, ascribes to it a special status which suggests its applicability in all matters. This attitude attains its crescendo in the credo that science has the only correct method and as such, has the only one correct solution to problems.

Consequently, with its doggedness on its methodological rules, science has become a repressive ideology, even though it arguably started as a liberating movement. Thus, the *so-called* status of science now ascribes to it a form of imperialism – scientific imperialism – which allows science to pride itself over and dominate all other human activities and forms of life in society. In practice, social, political, economic, religious, cultural, and all other activities in society are nowadays affected more or less by science. Indeed, science has had a major impact on society and the impact keeps growing as it drastically causes change in and determines virtually all aspects of society. In other words, science has “completely transformed outwardly, the manner of our living”^[2] and society as well. More so, with its auxiliary technology, science has initiated a chain of continuous change in society such that it becomes germane to query how society keeps going on with perpetual innovation that, in changing the shape of its environment, also transforms its attitudes, belief systems, morals, values, and basic philosophies.

It is clear that society has been grossly transformed by science. The evidence of the impact of science on society is everywhere and so obvious that science forms the basis of all human activity from housing, food, cars, to electronic gadgetry, etc. In fact, “the impact of science on society is very visible; progress in agriculture, medicine and health care, telecommunications, transportation, computerisation and so on.”^[3] This has led to the fixation on science which has made many people in different societies to give up their belief systems and even

*Corresponding Author: Henry Ovwigho Ukavwe
Lecturer in Philosophy Department of General Studies Plateau State University,
Bokokos, Plateau State, Nigeria Tel: +2347066958110

doubt the authenticity of science. As such, science seeks the control of society as it soars in the belief that its investigative methods are applicable in all fields of inquiry and all matters in society. This tendency implies scientific imperialism.

II. CONCEPTUALISATION OF ‘SCIENTIFIC IMPERIALISM’

Imperialism implies “the sense of arbitrary and capricious domination over the bodies and souls of men.”^[4] It refers to dominance or influence. Scientific imperialism, therefore, describes an attitude towards knowledge in which the beliefs and methods of science are assumed to be superior to, and to take precedence over, those of all other disciplines. In other words, scientific imperialism refers to situations in which science seems to act imperiously, such as “...the tendency to push a good scientific idea far beyond the domain in which it can provide much illumination.”^[5] Given this attitude, scientists “...are inclined to claim that they are in possession not just of one useful perspective on human behaviour, but of the key that will open doors to the understanding of ever wider areas of human behaviour.”^[6] The term ‘scientific imperialism’ seems to have been coined by Ellis T. Powell in 1920 to mean the subjection of all the developed and underdeveloped powers of the earth to the mind of man.^[7]

As such, due to the unreal expectations and mistaken assumptions which scientists harbour, they desire to extend the methods and ideology of science into regions of human investigation for which its method might be unsuited, such as to politics, religion and the humanities. For instance, some may want to believe that the study of politics or society can and should be modelled on the natural sciences. Thus, with its quest for dominance and control, scientific imperialism becomes the pursuit of power through the pursuit of knowledge.

Again, science involves a fundamentalist belief that it alone stands supreme over all other models of inquiry. As a result, science is most imperialistic when it seeks to dominate other disciplines and those it perceives as being insufficiently educated in scientific matters. Science becomes “the religion of the intellectuals,”^[8] and those who are not scientifically inclined are regarded as ‘non-believers.’ Thus, by insisting that all decisions, in principle, can be made scientifically, science becomes a rigid and intolerant form of intellectual monotheism. This is because it seems to reflect “a natural tendency, when one has a successful scientific model, to attempt to apply it to as many problems as possible.”^[9]

Furthermore, scientific imperialism marginalises non-scientists, and scientists see their ideas as irrational. Also, those who adhere strictly to the core dogmas of science seem to attract the greatest credibility, respect and reverence, because of the attitude that scientists alone belong to an elite class of people who deal with matters of greatest importance. Thus, scientists extol the exclusive virtues of the scientific paradigm over other modes of interpreting nature.

Scientific imperialism, the idea that all decisions, in principle, can be made scientifically has become widespread. Although science can and should guide action in some respects like building a plane or a bridge, curing diseases, and growing crops, it is widely believed nowadays even among non-scientists that science provides or will provide a complete guide to action. Despite the criticisms of the objectivity of science, faith in science continues to increase. Thus, scientific imperialism is marked by the attitude of assumed superiority on the part of science toward the established order of things.

However, since imperialism connotes domination and influence, and its basic features include that it is (1) an ideology, (2) a belief-system, and (3) hegemony, it becomes imperative to demonstrate such features in science in order to meaningfully argue that there is such a thing as scientific imperialism. Thus, our attention is now drawn to arguments for science as ideology, as a belief system, and as hegemony. This will construct a viable locale to implicate science as imperialistic.

III. SCIENCE AS IDEOLOGY

An ideology, especially in politics, refers to a set of ideas, a comprehensive vision, a way of looking at things and several tendencies proposed by the dominant class of a society to all members of this society. As a concept, ideology is central to politics because it is a system of abstract thoughts applied to public matters. Thus, a political ideology is a set of ideals, principles or doctrines of an institution or class that offers some political or cultural blueprint for a certain social order. The word ideology was coined by Destutt de Tracy in 1796^[10] from the words ‘*idea*’ and ‘*logy*’ with which he referred to the study of ideas. Furthermore, an ideology is a coherent system of ideas that is neither right nor wrong, but only is a relativistic intellectual strategy for categorising the world.

Ideology is an almost ideal way of life for society. Some (political) organisations and other groups try to influence people and the ideology of a society to become closer to what they want it to be by broadcasting their opinions. Thus, dominant ideologies often hold to assumptions that are largely unchallenged. Meanwhile, all other ideologies that differ, no matter what the content of their actual vision may be, are seen as radical. Michel Foucault made a trenchant description of dominant ideologies with the concept of apparent ideological neutrality^[11] because dominant ideologies appear as neutral.

Besides politics, science has been conceived as an ideology, an effective ideology, called *scientism*, that is, scientific imperialism. Thus, the scientific method is itself an ideology because at a deeper level, ideology refers to how frameworks get constituted and how criteria for acceptable conclusions get established on the basis of value systems or world views. Recent works have revealed that ideology acts as a constitutive determinant in science. In biology, for example, there are ideological determinants in conception of micro-processes, and even the most general features of organisms, the world and the universe.^[12] This is what is implied by saying that science is a world-view or an ideology.

The role of ideology in the voyage of science is contemplated by seeing the scientific method and its concept as part of an overall ideological project – a project which seeks to naturalise value systems which have a conservative tendency. Earlier on, a dichotomy was perceived between science and ideology. But now, the science-ideology dichotomy no longer feels dichotomous. This is partly because the concept of ideology seems less scandalous than it did earlier due to the sustained attention it has received, and also because science has become a dominant ideology. In the 1970s, for instance, scientists and philosophers of science squealed that to bring ideological analysis into science would lead to unthinkable relativism. Obviously, this sounds quaint in the light of postmodernist discourse of the 1990s.

However, any attempt to mount ideological critiques of science, attracts the reactions of eminently radical scientists. Thus, applying the concept of ideology to science, instead of labelling conservative and reactionary science as ideological, would be interpreted as joining the polluters and abandoning the claim to special affinity to the truth. Thus, scientists would prefer to wash science again and again, until the stain of ideology is removed and science becomes the whitest on the block. All of this would suggest the inherent embeddedness of ideology in scientific practice.

Science developed as a method, an open-ended method, of discovering the workings of existence. Science has established itself as the dominant and the only legitimate form of human knowledge. Science has claimed independence from the influence of social and historical conditions by tying its truth claims to methodology. Thus, scientists are presumed to be rational, objective and value-free, and also, people of intelligence, curiosity and ambition with training in technique. But sceptical scientists drive science to healthy ferment and stimulate fellow scientists to further discovery. Thus, new data continually displace old data and new hypotheses displace old ones. On the contrary, scientists with a personal or political ideology tend to stifle ferment and dissent. Such ideological scientists promote stagnation in science. Stagnant science is faux or junk science; it is no science at all.

An ideological science will produce shoddy, unreliable results that will not deserve the label ‘science.’ It will generate a perverted science because science and ideology are uneasy bedfellows. While science operates with liberal principles, ideology is conservative. Science operates on the basis of very particular values which often have no place in the average ideology. Science requires that we follow facts and experiments wherever they lead, even if they lead us to abandon long-held assumptions and beliefs. Most ideologies, on the other hand, value holding on to beliefs and assumptions in the face of any and all challenges. Such ideologies include religious ideologies, political ideologies and nationalist ideologies.

In practice, however, science has been transformed into ideology, perhaps, owing to its rigid methodological rules. The uniformity or consistency condition which permeates the scientific method has made an ideology out of science. Rather than abandoning long-held assumptions and beliefs, scientists nowadays, tend to hold on to ‘objective’ assumptions, theories or methods without allowing facts and experiments to direct the movement or progress of science. This ideological status ascribed to science leads to the assumption that the beliefs and methods of science are superior to those of other disciplines. Consequently, science becomes imperialism because, as an ideology, science attempts to suppress other aspects of life and strive to either influence or completely dominate them.

Science, taken as an ideology, invites unhealthy considerations into science, which promotes the erosion of objectivity and propagates personal or political values to influence scientists and scientific endeavours. Also, ideological science gives science a form of political clout which invites the ‘superior intellects’ (scientists) to act upon its inclination to dismiss ‘lesser intellects’ (non-scientists), with consequent disenfranchisement of vast numbers of citizen. This is a clear picture of scientific imperialism. And since ideology offers some political and cultural blueprint for a certain social order, science as an ideology can be manipulated or twisted to suit political preferences with the consequence that any value, attitude or belief promoted by a powerful group of scientists can be held up as scientifically sound and as the only standard.

Furthermore, as an ideology, science provides apparently empirical defence of a dogmatic point of view. In this case, the consistency condition may create a situation where a certain point of view petrifies into dogma by being, in the name of experience, completely removed from any conceivable criticism. As such, “...the insistence, on the part of the majority of contemporary physicists, on the consistency condition will, if successful, forever protect the uncertainties from refutation.”^[13] Thus, when the pursuit of a given theory, which started as merely interesting and intriguing, has led to successes and the theory is now reinforced, “...the suspicion arises that this alleged success is due to the fact that the theory, when extended beyond its starting

point, was turned into a rigid ideology.”^[14] So, the success of such theory may not be based on its agreement with facts. It may be entirely man-made; an ideological haranguing; it may have been successful because no facts have been specified that could constitute a test, and because some such facts have been removed. Such a theory, therefore, may lack objective relevance; its continuous existence may be the result of the effort of the community of believers and their leaders.

By and large, science will continue to be imperialistic if ideology continues to compromise scientific inquiry. And given this, science would continue to swallow up society by controlling and dominating it. Though science will inevitably be plagued with problems, science is also set up to discover and correct such problems. Thus, remaining independent of ideology is part of what the self-correcting process in science requires. As a result, those who seek to link science to their personal ideologies are, therefore, enemies of science.

IV. SCIENCE AS A BELIEF SYSTEM

Many scientists and philosophers of science have argued for the disparity between science and belief, and also, science and religion. Historically, science and religion have been conceived as irreconcilable antagonists. The obvious reason is because one who is thoroughly convinced of the universal operation of the law of causation cannot, for a moment, entertain the idea of a being that interferes in the course of events. Another reason is that science requires evidence whereas, belief does not. Belief is based on assumptions or things which were reportedly observed indirectly and subjectively, but only by a selected few people. Thus, it requires faith for a belief to gain grounds.

Science is the century-old endeavour to bring together, by means of systematic thought, the perceptible phenomena of this world into as thoroughgoing an association as possible. Put succinctly, it is the attempt at the posterior reconstruction of existence by the process of conceptualisation. Thus, science is methodical thinking directed toward finding regulative connections between our sensual experiences. Religion, on the other hand, deals with goals and evaluations, and, in general, with the emotional foundation of human thinking and acting. It is concerned with man’s attitude toward nature at large, with the establishment of ideals for the individual and communal life, and with mutual human relationship. Religion has mythical or symbolic content which is likely to come in conflict with science whenever this religious stock of ideas contains dogmatically fixed statements on subjects which belong in the domain of science.

However, formulating of belief system is essential to human survival, and perhaps even to human consciousness. As human beings, with no pre-existing knowledge of the universe, it is necessary that we make observations and draw conclusions from them in order to cope and survive. Thus, from the individual’s “...subjective experiences, an external objective reality must be assumed in order to function on a level beyond your average garden vegetable.”^[15] In any case, belief systems grow into complexity, beyond the initial simple common sense generalisations, and also, to attempt to explain and understand reality. Most scholars, scientists in particular, have problem with the claim that science is based on faith just as much as religion is. There is a common understanding that everyone, including scientists, must start their quest for knowledge with some improvable axiom – some *a priori* belief from which they deduce other truths. This starting point is a ‘given’ accepted without questioning. Eventually, in each belief system, there must be some improvable, presupposed foundation for reasoning since an infinite regression is impossible.

Basically, therefore, there are two broad categories of belief systems – scientific and religious. While religion as a belief system is based on faith, science as a belief system is based on methodology. The scientific method makes the assumption that the universe obeys a set of rules. This assumption is broken into two articles which must be taken entirely by faith:

- (1) There exists an external objective reality;
- (2) There exists some sort of uniformity through time, given that the universe has structure, and that predictions and generalisations are possible.

Above all, science, in practice, requires some amount of faith. It only differs from religion in the sense that while religion is a system of beliefs primarily based on faith, science is a system where beliefs are derived from objective methodologies. In other words, whereas science rejects assumptions based on faith, it makes assumptions based on objective methodologies. As a result, science cannot be done without some significant measure of faith.

V. SCIENCE AS HEGEMONY

Scientific imperialism in the guise of contemporary science with *de facto* scientism, touts the universality of its monochromatic methods as the only path to knowledge, and thus, marginalises other knowledge systems, especially the indigenous. And if this hegemony of science gains more ground, science would indubitably lead to the dissolution, or even enslavement, of mankind because the influence of scientific reasoning is already becoming alarming. Science has been transformed into a rationality of domination. As such,

scientific knowledge has become a power which “knows no obstacles: neither in the enslavement of men nor in compliance with the world’s rulers.”^[16]

The vortex of scientific practice is captured by the dictum that “...what men want to learn from nature is how to use it in order to wholly dominate it and other men. That is the only aim.”^[17] Thus, science has become a means of control and domination, a stark, totalising empiricism. Science which is the pursuit of knowledge has become the pursuit of power; a universal and dominating systematic rationality. On the contrary, critiques have demystified the substantive content of mainstream scientific practice, revealing the ideology of domination concealed behind the facade of objectivity. It has thus, become increasingly apparent that scientific knowledge, far from being objective, reflects and encodes the dominant ideologies and power relations of the culture that produced it; that the truth claims of science are inherently theory-laden and self-referential; and consequently, that the discourse of the scientific community, for all its undeniable value, cannot assert a privileged epistemological status with respect to counter-hegemonic narratives emanating from dissident or marginalised communities.^[18]

Consequently, Alan Sokal denied that science provides absolutes or exactitudes as it claims. Using the Newtonian mechanics as an example, Sokal indicated that although it describes the motions of the planets with great precision, it is nevertheless wrong. Quantum mechanics and relativity are closer approximations to the truth, which is an object fact, but these theories will too one day be superseded by theories yet more precise.

Furthermore, the hegemonic character of science has qualified its equation to an oppressive bourgeois economic system; a character that, arguably, aided the development of capitalism. It is evident that empirical methods were used in the service of the development of a dominating economic structure. Thus, modern science is implicated and effectively reduced to an overarching paradigm containing a repressive quality adapted by the ruling bourgeois class. In this sense, science is at once the vehicle of progress and repression, of mastery and domination. In other words, as mankind progresses materially through science, the technical easing of life which science brings also brings with it a persistence of domination and “a fixation of the instincts by means of heavier repression. ... Adaptation to the power of progress involves the progress of power. ...The curse of irresistible progress is irresistible repression.”^[19]

Another important dimension of the hegemony of science is the marginalisation of indigenous knowledge systems by Western science. From observation, indigenous knowledge systems are constantly systematically discredited while Euro-centric conceptions serve as a basis for the dominant discourses. In developing nations especially,

State policies – in fields as diverse as forest management, health, agricultural research or even education – embody a clear bias against the “traditional.”

Indigenous technologies and conceptions of irrigation, metallurgy, textile-making, architecture or logics have been consistently discarded.^[20]

Furthermore, modernisation is invariably interpreted as a greater degree of acceptance of concepts and techniques that emanate from Western culture, all in the name of modern science. As a result, traditional methods and order of things are commonly supplanted by imported models promoted through government policies. In recognition of the contemporary relevance of indigenous knowledge systems, it should be noted that while adopting and embracing aspects of other cultures is indeed a driving force of modernisation, building-up and strengthening local traditions should be a priority. Thus, the desire to modernise via modern scientific models should not in any way be allowed to either sacrifice or suffocate indigenous traditions and knowledge systems.

The bias towards modern science is so pervasive that indigenous knowledge is now being assessed and validated through Western scientific parameters, without bearing in mind that “the theoretical foundations and conceptual frameworks underlying the indigenous knowledge systems and the Western one differ.”^[21] Hence, it is absurd to gauge one in the terms of another. Finally, it is expedient, however, that alternative ways of knowing or local knowledge should be meant to serve as an antidote to the hegemony of the so-called Eurocentric scientific methodology.

VI. AGAINST SCIENTIFIC IMPERIALISM: A PROPOSAL FOR EPISTEMOLOGICAL ANARCHISM IN SCIENCE

Many theories and theorists have argued for the refutation of scientific imperialism. Epistemological anarchism is one of the most outstanding of such theories, and Paul K. Feyerabend is its originator. *Epistemological Anarchism* is an epistemological theory which holds that there are no useful and exception-free methodological rules governing the progress of science or the growth of knowledge. It holds further that it is an unrealistic, pernicious and detrimental idea to science that it can or should operate according to objective or universal and fixed rules. Feyerabend essentially established this position in his books *Against Method* and *Science in a Free Society* defending the idea that there are no methodological rules which are always used by scientists. He argued that a single prescriptive scientific method would limit the activities of scientists, and

hence restrict scientific progress. For him, epistemological anarchism was desirable because it was more humanitarian than other systems of organisation, by not imposing rigid rules on scientists, and so, science would benefit from a dose of it.^[22]

Feyerabend suspects scientific imperialism though he may not have used the word. He conceived the possibility of science creating a monster, through an objective approach, that will harm people, turn them into miserable, unfriendly, self-righteous mechanisms without enchantment or humour. He is suspicious that the objective methodology of science will weaken man's strength as a human being. Thus, he is convinced that a reform of the sciences that makes them more anarchic and more subjective is urgently needed.^[23] In short, Feyerabend's description of the scientific method and its effects on scientific progress and humanity prefigures a form of imperialism. Also, his call for a reform of science spells his dislike and outright refutation of scientific imperialism.

Feyerabend's most prominent contributions in the field of philosophy of science have argued that the customary accounts of scientific knowledge and scientific method are faulty, as such have denied that there is even such a thing as 'the scientific method.' He introduced the term '*anarchism*' to mean methodological pluralism, and argued that the purported scientific method does not have a monopoly of truth or useful results. He thus, recommends 'anything goes' attitude toward methodologies. Brett Watson captures the creed of epistemological anarchism succinctly thus:

Science is not the only worthwhile human goal, and within science as a goal there is no one proper method...we are better off with many methods than with dogmatic adherence to any single method. So let us have many methods, and many spirited debates as to why one method is better than another. Let the practitioners of each method boast with their results, the progress that they make, the technologies they develop, the discoveries they bring to light, their explanatory or predictive power; and let them adopt all the best techniques of their opponents as they recognize them.^[24]

Scientific imperialism, thus, drives science to seek an exalted position in the pantheon of knowledge. Feyerabend dislikes the smallest dint of imperialism in science. Small wonder he said:

Science, of course, must be reformed and must be made less authoritarian. But once the reforms are carried out, it is a valuable source of knowledge that must not be contaminated by ideologies of a different kind.^[25]

Imperialism, in most cases, is initiated by an ideology. Feyerabend gives a clear impression that science is imperialistic by conceiving science as an ideology, likening it to a fairy-tale, and canvassing for the defence of society from science. According to him,

I want to defend society and its inhabitants from all ideologies, science included. All ideologies must be seen in perspective. One must not take them too seriously. One must read them like fairy-tales which have lots of interesting things to say but which also contain wicked lies.^[26]

Science is only one particular way of gaining information and of interfering with the world. There are other such ways and they are satisfactory in the sense that they meet the spiritual and material needs of those who use them. Initially, science was always at the forefront of the fight against authoritarianism and superstition, and it has led to increased freedom from religious beliefs and liberation from ancient and rigid forms of thought. Consequently, science occupies a special place and has a hold on the minds of people in society. Some thinkers like Kropotkin want to overcome all traditional institutions and forms of beliefs, with the exception of science perhaps because of the belief that science brings liberation and enlightenment.

Feyerabend argues on the contrary. He argues that by breaking the hold which some comprehensive systems of thought have on the minds of men, science contributes to the liberation of man and aids enlightenment. But he argues raucously that it does not follow that because 17th and 18th century science was an instrument of liberation and enlightenment, then science is bound to remain such an instrument. According to him:

There is nothing inherent in science or in any other ideology that makes it *essentially* liberating. Ideologies can deteriorate and become stupid religions. Look at Marxism. And that the science of today is very different from the science of 1650 is evident at the most superficial glance.^[27]

Thus, Feyerabend does not claim that science, as it were, is a dogma, but rather that science has become dogmatic, as does any ideology which gains an effective monopoly.

In education, today, scientific facts are taught at a very early age in the same manner in which religious facts were taught barely a century ago. It weakens the critical abilities of the pupils, depriving them from seeing things in perspective. Then, at higher levels of learning, indoctrination is carried out in a much more systematic manner. Science is perpetually exempted from criticisms whereas the judgements of scientists command the same weight and reverence as those of bishops and cardinals only a century ago. Invariably, science which was

once liberating has become repressive; it has now become as oppressive as the ideologies it had once to fight. Thus, science is just one of the many ideologies in society; it has no special status and is not in any way superior to other ideologies. So, science should not influence society more than any political or pressure group is permitted to influence society because scientists become chauvinistic and totalitarian when given the chance to run society all by themselves.

Henceforth, as a lecturer and a scholar, Feyerabend demolished virtually every traditional academic boundary, holding no idea and no person sacred, and discussing anything with unprecedented energy and enthusiasm. He questioned the basis for the special status of science wondering how science differs from other forms of knowledge like witchcraft, and whether it provides the only rational way of cognitively organising our experience. He opined that, with its fixed methods, science cripples our intellects and stunts our individuality.

VII. CONCLUSION

It has been argued in the foregoing that science, with its method, has designed a cognitive model for society. This cognitive model is a conceptual framework, a recognition system, which determines what reality is or not. Thus, the trend in society today is one where anything that does not get the recognition or approval of the scientific model is rejected as meaningless or unreality. With this, human perception, both at the individual level and at the level of the entire society, is subject to the direction and control of the cognitive model of science. And consequently, science tells us what society or reality is and we have only to take it as 'thus says science,' whether it is correct or not. As such, through its cognitive model, science wields enormous influence and control on society; science has dominated and even swallowed up society such that science now determines society and no longer society determining science.

In conclusion, contrary to the apparent currency of science's domination and taking over of society, it is pertinent to suspect that not all the impacts of science on society are positive or at least correct. In short, the Kantian distinction of things-in-themselves and things as they appear to us justifies this objection. Thus, science should not be over-stretched and applied beyond its domain. Science is but one of the phenomena in society and it must be treated as such and with respect for the other phenomena in society. As a result, society must be defended from science and the relationship of science to society must be seen, appropriately, as one where science is but an instrument of progress in society and not an instrument for the overthrow of society. To achieve this, all the imperial tendencies in science must be repealed so that science can be, once again, presented as an instrument of liberation and not one of repression.

REFERENCES

- [1] P.K. Feyerabend, "On the Critique of Scientific Reason," *Essays in Memory of Imre Lakatos*, 1976, p. 110.
- [2] P. Krishna, "The Impact of Science on Society," http://www.pkrishna.org/Impact_science_society.html, Retrieved on 20/06/2009.
- [3] Ibid.
- [4] "Scientific Imperialism", an Address Delivered by Ellis T. Powell to the Commonwealth Club of Canada on 8th September, 1920. Quoted in "Scientific Imperialism", www.en.wikipedia.org/wiki/scientific_imperialism. Retrieved on 14/06/09.
- [5] J. Dupré, "Against Scientific Imperialism", *Philosophy of Science Association Proceedings 2*, www.cogprints.org/342/0/IMPERIA.htm, 1994. Retrieved on 15/01/2009.
- [6] Ibid.
- [7] "Scientific Imperialism", www.en.wikipedia.org/wiki/scientific_imperialism.
- [8] J.E.R. Staddon, "Scientific Imperialism and Behaviourist Epistemology: Behaviour and Philosophy", 2004, http://findarticles.com/p/articles/mi_qa3814/is_200401/ai_n9383856. Retrieved on 12/02/2009.
- [9] J. Dupré, "The Disunity of Science" (2006), Interviewed by Paul Newall, Cf. "Scientific Imperialism", Op. Cit.
- [10] K. Emmet, "'Ideology' from Destutt De Tracy to Marx", *Journal of the History of Ideas*, 40, July-Sept., 1979, pp.353-368.
- [11] "Ideology", <http://en.wikipedia.org/wiki/ideology>. Retrieved on 12/08/2009.
- [12] R.M. Young, "Science, Ideology and Donna Haraway", <http://www.human-nature.com/rmyoung/papers/paper24h.html>. Retrieved on 12/08/2009.
- [13] P.K. Feyerabend, *Against Method: Outline of an Anarchistic Theory of Knowledge*, (London: New Left Books, 1975), p. 42.
- [14] Ibid., pp. 43-44.
- [15] A. Davidson, "Science as a Belief System", <http://spaz.ca/aaron/school/science.html>, Retrieved on 02/08/2009.
- [16] Horkheimer and Adorno, *Dialectic of Enlightenment*, (New York: Continuum Publishing Company, 1998), p. 4.
- [17] Ibid., p. 4.
- [18] A. Sokal, *Fashionable Nonsense: Postmodern Intellectuals Abuse of Science*, (New York: Picador, 1998), p. 213.
- [19] Horkheimer and Adorno, *Dialectic of Enlightenment*, pp. 35-36.
- [20] C. Pionetti, "Hegemony and Biodiversity: The Marginalization of Indigenous Knowledge Systems", <http://base.d-p-h.info/fr/fiched/premierdph/fiche-premierdph-4120.html>. Retrieved on 14/06/2009.
- [21] Ibid.
- [22] "Paul Feyerabend", www.wikipedia.org/wiki/Paul_Feyerabend. Retrieved on 08/04/2009.
- [23] P.K. Feyerabend, *Against Method*, p. 154.
- [24] B. Watson, "In Defence of Feyerabend", 16th June, 2003, www.nutters.org/docs/feyerabend. Retrieved on 10/05/2009.
- [25] P.K. Feyerabend, "How to Defend Society Against Science", *Radical Philosophy*, 03, 1975.
- [26] Ibid.
- [27] Ibid.