



WHITEHEAD'S POSTMODERNIST VIEW: AN ALTERNATIVE CONTEXT FOR EDUCATION

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Modern world is dominated by science, scientific method and technology. That world defines the context in which education occurs and that view of modern worldview impacts on the theory and practice of education. Whitehead in his book Science and the modern world particularly provided us with a well-reasoned analysis of the rise of science and scientism and their effect on society. Whitehead argued that the methods of science so successfully applied to material objects. But these methods have been erroneously applied to human beings and our societies (Evans, p. 15).

All of the western society as well as most of the world are connected as if the laws of physics applied not only to material objects, but also to persons and human societies. Whitehead proposed a counter to this philosophy of mechanism calling it a philosophy of organism. His philosophy is the basis for creating a new context is 'A Postmodern Worldview'.

Key elements of the article:

- Concept of postmodernism
- Key points of modernism
- Difference between postmodern and modern education
- Alfred North Whitehead on postmodernism
- The Modern Worldview
- New alternative for solution: Whiteheadian Postmodern Worldview
- Final Remarks

Introductory sketch of Postmodernism

Concept of Postmodernism: Postmodernism just means ‘coming after’ modernism. The term is used to refer to period in history (the one we’re in now) but it is also used to refer to ‘a set of ideas’ is a reaction to and to some extent of rejection of the ideas of modernism (<http://www.shiftingthinking.org/?page-id=53>). Ward (1997) said that postmodernism is not a school of thought. It is not a unified intellectual movement with a definite goal or perspective. Postmodernism can be the set of ideas which try to define or explain the state of affairs in society or a word used in many different contexts to cover many different aspects. “Postmodernism is formed by but is a reaction against the modern worldview” (Rudd, 2006). According to Jary & Jary (1995) “Postmodernity is seen as involving such features as a world of ‘flux, flow and fragmentation’, without absolute values, an end of the dominance of an overarching belief in ‘scientific’ rationality and a unitary theory of progress, the replacement of empiricists theories of representation and truth, and an increased emphasis on the importance of the unconscious, on free-floating signs and images, and a plurality of viewpoints” (as cited in Wright, Module Three-Lesson Two: The Modern and Post-Modern).

In the other words, postmodernism is based on the view that society has entered in a new phase. That new phase has few characteristics----

- Fragmentation,
- Death of meta-narrative,
- Flexibility, and
- Relativity of truth (<http://www.slideshare.net/lucylee79/postmodernism-and-education>)

Changes during Modernism: Some changes are appear in modernism -----

- Adoption of new technologies into daily life of ordinary people.
- Associated with urbanization and changing social traditions also come smaller families and changed relationships between parents and their children.
- Technologies such as- automobile, modern medicine, telephone etc. altered our perception of time and space through communication and speed (http://www.slideshare.net/MissConnell/Postmodernism_lesson?next_slideshow=1).

Key Points of Modernism:

- ❖ Inspired by technology and science
- ❖ Applied mathematical and scientific logic to all human process

- ❖ Sought to thing efficient and productive
 - ❖ Profit driven capitalism was the base ‘superstructure’ behind production
 - ❖ Mass production and factory labour
 - ❖ Science and technology seen as essential components in human evolution
 - ❖ Design based around need and function
 - ❖ Efficiency and cost productiveness
- (http://www.slideshare.net/MissConnell/Postmodernism_lesson?next_slideshow=1)

Difference between Modern and Postmodern education:

- ✚ **Usher & Thompson** (1997) describes the difference between modern and postmodern education (<http://www.slideshare.net/lucylee79/postmodernism-and-education>) ---

Modern Education

- i. Education controlled by state
- ii. One size fits all
- iii. Fixed in time (strict time-table)
- iv. Fixed period in life
- v. Teacher led- students passive

Postmodern Education

- Controlled by communities
- Diverse and customised
- Flexible (distance learning)
- Life-long learning
- Active learners, learning through experience

- ✚ According to **Dennis McCallum** difference between Modernist and Postmodernist educational theory are as follows (<http://www.xenos.org/essays/comparing-modernist-and-postmodern-educational-theory>) ----

	Modernist Educational Theory	Postmodernist Educational Theory
Knowledge	Educators ideally should be authoritative transmitters of unbiased knowledge.	Educators are biased facilitators and co-constructors of knowledge.
Culture	Culture is something students should learn about, but can also be a barrier to learning. Students from diverse cultures must be trained in a shared language, or medium of communication, before teachers can transmit knowledge to them.	The modernist goal of unifying society results in domination and exploitation, because unity is always based on dominant culture. All culture are not only of equal value, but also constitute equally important realities.
Values	Traditional modernists believe that educators are legitimate authorities on values, and therefore they should train students in universal values. More liberal modernists argue that education should be "values-neutral." Teachers help students with "values clarification" deciding what values each individual student will hold. Values can, and should be separated from facts. The most important values are rationality and progress.	Education should help students construct diverse and personally useful values in the context of their cultures. Values are considered useful for a given culture, not true or right in any universal sense. Since teachers cannot avoid teaching their own values, it's okay for teachers to openly promote their values and social agendas in the classroom. Important values to teach include striving for diversity, tolerance, freedom, creativity, emotions and intuition.
Human Nature	Modernists generally believe in a stable, inherent self that can be objectively known. In addition, since humans are thought to have a stable essential nature, IQ tests, and other similar "objective tests", can be used to discover students' innate intelligence. By giving them mastery over subject matter, teachers enhance students' self-esteem. Education helps individuals discover their identities. Individuals and society progress by learning and applying objective knowledge.	Students have no "true self" or innate essence. Rather, selves are social constructs. Postmodern educators believe self-esteem is a pre-condition for learning. They view education as a type of therapy. Education helps individuals construct their identities rather than discover them. Individuals and society progress when people are empowered to attain their own chosen goals.

Alfred North Whitehead on Postmodernism

Alfred North Whitehead's philosophy as postmodern is not only appropriate but also illuminating, calling attention to aspects of his philosophy that challenge several distinctively modern tenets (Griffin, 2007, p. 3). Although 'postmodern' was not used by Whitehead himself, the notion was implicit in his book *Science and the modern world*, in which he said that recent developments in both physics and philosophy has superseded some of the scientific and philosophical ideas that were foundational for the modern world.

Whitehead implied that his own philosophy, which sought to unite the philosophical implications of relativity and quantum physics with the Jamesian rejection of dualism, was distinctively postmodern, although he did not use the term. **Cobb** portrayed Whitehead's philosophy as distinctly postmodern by virtue of three features – its epistemology rejected the primacy of sense perception, its ontology replaced material substances with events having intrinsic value and internal relations, and these ideas were developed through reflections on problems in modern science (Ibid. p. 4).

The Modern Worldview: The modern worldview is seen as the current context for education. Whitehead wrote in his book *Science and the modern world* that the modern world has been and continues to be significantly shaped by science, scientism and technology. Our society as well as education are influenced by an extensive science (Evans, p. 15). That influence of science describes the two contexts for education in the modern world – dominance of science on modern world and the idea of mechanism affects education.

- I. **Dominance of science on modern world:** The modern world dominated by scientific thought, has its roots in 17th and 18th century science. The great historic names of Descartes, Galileo and Newton are associated with the foundations of modern science and the modern world. Griffin (1988) describes the effect of the scientific age on the current context of education.

The growth of scientific knowledge and its progeny, invention and technology, has resulted in a far reaching influence on western society by science, technology and scientific method. The extent and intensity of technology has increased rapidly in the 20th century. Modern science has created a wondrous world of communications highway, biogenetic materials, high speed travel, changing workplaces and altered inter-personal relations. We, as a western society, are sustained and beguiled by new

inventions and applications of technology to nearly every aspect of our lives, including our educational institutions (Evans, p.16).

This dominance of science **arises main issues in the context of education**. The heart of the issue of context of education in the modern world is not the wondrous extension of science and technology. The issue of context has to do with the **effect of scientism on every facet of our lives**. We are not only surrounded by technology developed from scientific research, we are also **educated, persuaded and required to adopt and utilize the methods of science to solve social, business and personal problems**. Some Western society as well as in all over the world, we think that science and technology can solve all problems (Ibid.).

In other words, Whitehead said that “This quite growth of science has practically coloured our mentality so that modes of thought which in former times were exceptional are now broadly spread throughout the educated world. The new mentality is more important than the new science and technology. It has altered the metaphysical presuppositions and the imaginative contents of our minds; so that now old stimuli provoke a new response” (Whitehead, *Science and the modern world*, p. 2).

The successes of science and technology have created in our society a sense that the **methods of science should be applied to all aspects of society**. From the highly successful methods of the laboratory have come methods of social science in such varied fields as economics, sociology, anthropology, political science, psychology and education. Quantification and objectification are supreme characteristic of modernity. We measure, count and record everything from market transactions to personal intimacies. Some measures are necessary and important but some of measures are inappropriate to describe and understand human beings, their behaviour and societies. In the last decades of the 20th century, **statistical treatment of human behaviour in surveys, polls and tests have assumed an aura of truth and accuracy**. Surveys and tests do not describe the experience, emotions and expectations of individuals; only their knowledge/opinion on a small matter at a given point in time. Insistent that scientific method is the right and only way is pervasive aspect of modernity. Scientific methods are not the ‘right way and only way’ to deal with societal situation (Evans, pp. 16-17).

II. The idea of mechanism: The mechanistic paradigm has several interrelated concepts, some of them directly addressed by Whitehead. Education and the context in which educating occurs are affected by several mechanistic ideas. These ideas are as follows ----

- a) **Simple Location** is the idea that a thing is where it is in time and space and isolated from every other thing. This is contrary to Whitehead's philosophy of organism in which everything is connected to everything else. Our direct experience shows us that events, objects and emotions are indeed connected. For example, a tree is not simply an object of leaves, wood and certain biochemical structure. It is part of an environment that is interconnected in multiple ways. Nothing, not even a rock, is simply located except as an abstract conceptualization (Evans, pp. 17-18).
- b) **Misplaced concreteness** is the notion of taking what we perceive as being real and acting as if that is all there is. Concepts associated with schooling such as faculty, student, class, grade are splendid examples of a kind of misplaced concreteness. The reality behind the words is that of individuals in all their wondrous complexity, most of which is lost or unappreciated when language is restricted to a present concreteness (Ibid. p. 18).
- c) **Abstraction** addresses much the same sort of ideas as misplaced concreteness. When we draw away from the whole. Abstractions takes as reality: worker, boss, student, teacher, tree, flower, red, green, liberal, conservative lead to errors of understanding – errors that plague modern society. The concern that educators should bear in mind is that the labels for persons and ideas always obscure the reality of any object. In the late modern context, words and ideas are manipulated for expediency's sake and without intent, those words create problems of complete understanding (Ibid.).
- d) The modern worldview deals with **linear cause and effect**, the effect of external relations on natural objects and events. The impact of Newtonian physics on western thought is most clearly visible in the way we link cause and effect in much of our lives. In the modern world, we look at causation principally in terms of efficient causes. We ignored the final cause or subjective aim as is creativity. A mechanistic paradigm has no place for either human will or for the spontaneous, creative, self-organization which also exists (Ibid.).

e) **Individualism, Differentiation, Mechanization and Materialism:** These concepts have significance for education. Critics of the modern worldview see these four concepts having negative effects on society. **Individualism** is said to raise up individual interests and in so doing to deny the importance of the individual in community. **Differentiation** is said to emphasize differences between and among persons, objects and events and in so doing to break the existing connectedness. **Mechanization**, referring to the use of machines, is said to accommodate persons to machines and in so doing to diminish our humanity. **Materialism** is said to emphasize the primacy of persons and machines and in so doing ignores the place of human beings in nature (Ibid. pp. 18-19).

Current mechanistic context of modern society creates problems for educating: These concepts of individualism, differentiation, mechanization and materialism present a problem for the education of human beings. These concepts having negative effects on society and schooling (Griffin, 1988). The concept of **individualism** emphasize **individual work and assignments**. Evaluation systems have depended on individual performance, **not collaboration**. Only in recent decades has cooperative learning been accepted, and then not universally. Schools and most institutions act as if the keystone to our complex contemporary society is rugged individualism. Most researches, cooperative planning, some contemporary industrial production and much work-task achievement require a degree of collaboration (Evans, p. 19).

Differentiation only presents a problem when applied erroneously to human situations. Discovering and examining differences is an essential aspect of much of life, including education. Knowing about differences and acting in response to differing characteristics of students is not the problem. The problem is allowing knowledge of differences to interfere with the connectedness of students, students and their learning, and of the school and community. Universal education has brought into schools a wide range of students; their differences are real, so is their common humanity. To classify, program, track, and differentiate in myriad ways is to jeopardize a sense of community for students and to limit or eliminate their connectedness (Evans, p. 19). Evans is urging educators to ignore the very real differences that exist, but to recognize the problems differentiation creates and to act, however possible, to build a sense of community in the midst of diversity.

The direct implications of mechanization, thought of as accommodation of persons to machines, is evident in two ways. **First**, we immediately think of the organization of schools with bells, buzzers, schedules and requirements – all very mechanical. In that sense, the students are bound by the computer, clock and buses. The concept of mechanization that troubles modernity's critics has to do specifically with accommodating humans to machines. It is obvious that human beings have been accommodated to machines in the workplace. The **second** relevant matter is that in the information age, machines impact on teaching and learning. Computers are changing the relationships of persons and things in schools in ways that we do not yet fully appreciate. Machines require students to accommodate to their command structure, but use of those same machines is empowering the students and teachers. **The impacts of computers and other machines that limit and dehumanize individuals is a concern in modernity that will carry on into postmodernity (Evans, pp. 19-20).**

Materialism, emphasizing the primacy of human beings and their material needs, is a characteristic of modernity that is everywhere. Advertising, entertainment, sports and many publications are focused on creating “need” for material things. In such type of school environment understandably tend to develop curriculums that emphasize and glorify invention and technology. A focus in school is so materialistic virtually precludes attending to other values such as altruism, caring, spirituality and conservation of resources (Ibid. p. 20).

New alternative for solution: Whiteheadian Postmodern Worldview: The modern view of mechanistic and materialistic approach creates ‘virtually insurmountable problems for educating in that society’ (Evans, p. 20). The 20th century may be the most modern century. It is also the period, particularly since mid-century, of awareness that a postmodern era is emerging. Although Whitehead's philosophizing pre-dates general awareness of postmodernity and his metaphysics addresses many of the elements of a postmodern world. The shift from modernity to postmodernity impacts on education. Whitehead's philosophy aids in explaining and understanding the myriad shifts in education that accompany the larger shifts from modernity to postmodernity (Ibid.).

That worldview describes in three sections – one kind of postmodernism, creativity and shifts of emphasis.

- i. **One kind of Postmodernism:** A promising alternative to the mechanistic context of the modern era is one derived from **Whitehead's philosophy of organism**. His philosophy repudiates that context because the concept carries the laws of physical

world applied to everything. In *Science and the modern world* and in *Process and reality*, he advocates that the **basis of science be recast and founded on the concept of organism**. His philosophy of organism represents the worldview and the world order and it implies are a radical alternative to a Newtonian worldview. That Newtonian worldview based on ideas of inert objects subjects to external forces. Whitehead's worldview is **based on processes associated with living things and even changes of things we think of as inert. Organism replaces mechanism and the metaphor of the machine is replaced by the metaphor of the tree of life** (Evans, p. 21).

The influence of the philosophy of organism on this postmodern era could result in sweeping changes, at times radical departures from the positions of modernity, in physics, biology, psychology and religion as well as in philosophy itself. The very foundations of modern thought may be revised, discarded, reshaped into something beyond modernity into forms of postmodernity. The influence of Whitehead's philosophy of organism and his philosophy of education on the emerging epoch is one of several factors in postmodern thought (Ibid.).

To describe the postmodern context that Whitehead's philosophy influences, Evans will use the term *constructive postmodernism* (Ibid. p. 22). Constructive postmodernism is an inviting and useful term. **David Griffin** defines constructive postmodernism in the following terms: *"It seeks to overcome the modern worldview not by eliminating the possibility of worldviews as such, but by constructing a postmodern worldview through a revision of modern premises and traditional concepts. This constructive or revisionary postmodernism involves a new unity of scientific, ethical, aesthetic and religious intuitions. It rejects not science as such but only that scientism in which the data of the modern natural sciences are alone allowed to contribute to the construction of our worldview (Griffin, 1993)"*. Evans said that Griffin's vision is quite suitable for explaining the Whitehead-based context for education.

- ii. **Creativity:** The first significant element of Whitehead's philosophy of organism the relations. In a mechanistic paradigm, the emphasis has been on external relations. According to Whiteheadian philosophy, external relations are now less important; but are not ignored. In other words, his philosophy applied to complex society, focuses attention on **the relationships** of that society to every other element of that society,

and of the relationships of that society to every element of its natural and human made environments. There are indications of **shifts towards organismic thinking** in several life – resource utilization, management practices, learning strategies and cognitive sciences come to mind (Evans, p. 22).

The central idea around which Whitehead's philosophy, the accompanying worldview, and the related world order are developed is **creativity**. In *Process and Reality*, he names creativity as the *universal of universals* (Whitehead, 1929). Whitehead's creativity is in everywhere (you, me, minute particles, neurons, animals, even seemingly inert objects such as stones). The instance of creativity is present deep within every aspect of the world. Creativity brings about change and evolution, even on the most minute scale, is present and active in everything. That creativity underlies the motion of molecules, creation and withering of cells, integration of experiences, feelings of love and hate, growth of living organisms, the aging of all material things, birth and procreation etc. (Ibid. p. 23).

Creativity makes the Whitehead's postmodern world. Creativity exists in all things, powers the processes of change which follow a pattern, whether minute or gargantuan, of the past influencing the present which in turn becomes the future. ***Relationships, creativity, and the processes associated with these concepts are principal elements of the philosophy supporting constructive postmodernism*** (Ibid. p. 24).

- iii. Shifts of Emphasis:** The constructive postmodern alternative does not repudiate all aspects of modernity. A thoughtful reading of Whitehead shows that what he called scientific materialism is what he wished to **alter**. He does not call for abandonment of the fruits of modernity, but rather **looks for new emphases and new appreciation of a different reality**. He does call, as indicated earlier, for science to be based on a philosophy of organism, any such approach means that in society continuing to be dominated by science and technology. There will be several shifts from the ***theories and practices of modernity to those of constructive postmodernity*** (Ibid.).

An organic worldview sees everything as being connected; thus in such a worldview there are no isolated individuals. Whitehead's worldview (organic worldview) that prizes community and perceives individuals as being in community. Emphasis on the individual in community need not mean loss of individual identity. In fact, the

connectedness of belonging to community may strengthen and enlarge our personal sense of self and thereby enhance individuality, but not the type of individuality that is characteristic of modern society and incompatible with constructive postmodernism. For persons with experience in modern society, emphasizing individual attainment, individual property and individual rights, the shift away from individualism is a difficult aspect of the Whiteheadian alternative to understand and accept (Ibid. p. 25).

A shift of great importance, is *from simple reductionist solutions to complex situations* and toward deliberate use of *system thinking*. System thinking to be a form of thought about events and objects that acknowledges the interdependence of every aspect of an event. Whitehead's attention to relationships, to time-space connectedness, and to process provide the philosophical and theoretical basis for stressing system thinking in a context shaped by his thoughts (Ibid.). The late 20th century work of Peter Senge and others to move planning and management away from simple linear thinking toward more inclusive, complex thinking has been greatly expanded in the constructive postmodern era (Senge).

One of the most interesting shifts for society as a whole and education in particular is away from competition towards collaboration. Competition is an emotionally charged word in modern society associated with advancement in workplace, vying for profits in the marketplace, winning in individual and team sports and conflicts throughout modern society. The emergence of a global economy at the end of 20th century has brought competition to the fore and into the vocabulary of presidents, statesmen and politicians. Evans shows that Whitehead had clear views about competition and its opposite, cooperation. He took an historical perspective, seeing the end of community and the rise of competitiveness as associated with the demise of medieval society and the beginning of nationalism and extensive trade (Ibid. p. 26).

What Whitehead calls the struggle between strife and harmony has been characteristic of modernity. He sees this strife as simply masking the conflict between an ideal of competition and an ideal of cooperation. Whitehead came down on the side of cooperation as more fundamental (Ibid.). He wrote, "Successful organisms modify their environment. Those organisms are successful which modify their environments

so as to assist each other” (Whitehead, *Science and the modern world*, p. 205). **This notion is at the root of how the struggle between competition and cooperation is resolved in a Whiteheadian context.** Cooperation towards constructing and maintaining a mutually beneficial society is Whitehead’s way. “Collaboration” is the term Evans choose to describe the milieu of education in the Whiteheadian context. Cooperation implies one level, a level of good will and complementarity. Collaboration implies another level of full commitment to mutual effort, join use of resources and shared purposes. **Constructive postmodernism** is characterized by the presence of collaborative efforts to maintain community, to preserve the environment, to secure economic justice, to govern wisely and to educate the young. What Evans envision is not a utopian society, but one in which strong reaction to much of the dysfunction in late modernity energizes a will and a culture of mutuality and collaboration that limits competition to activities which are not destructive of community, individuals, or their societies (Ibid. pp. 26-27).

Final Remarks: Whitehead wrote in *Science and the modern world* (1925), “My point is that a further stage of provisional realism is required in which scientific scheme is recast and founded upon the ultimate concept of *organism*” (Whitehead, p. 64). Whitehead is pointing towards a wholeness that minimizes inappropriate reductionism and focuses on the relationship of the whole to the parts. His philosophy of science, or in theory and practice of deep ecology, is one that is dominant and essential to the altering of science in a constructive postmodern context (Evans, p. 28).

In the postmodern era, a new, fascinating construct has emerged to create a new body of knowledge that is relevant and appropriate. Whitehead wanted to change scientific thinking. He attempt to describe a new context in which there is new worldview and a new world order. That worldview is organismic and the related world order modifies the extensive scientism so characteristic of modernism (Ibid. p. 29).

At the end we can be say that Whiteheadian alternative of Postmodernism solve the problem of modernism and create a new world of environment which emphasizes education. In sum postmodern world will have following characteristics (Evans, p.22) ---

- People’s lives have meaning
- Satisfactory participation in community
- The environment is protected and renewed
- An extensive spirituality prevails

- Reason is enriched by intuition
- Creative change is tempered with tradition
- Human beings and all of nature are seen as unity

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