Methods of Analysis
Environmental Analysis
Stephen Petrina (2021)

Counter-intuitively, environmental analysis in the arts and humanities is often characterized as an opposition against one environment or another. This does not necessarily mean analysis against the natural environment. Rather, analysis typically proceeds against cultural, media, social, or technological environments. In mid-twentieth century, literary theorists envisioned the creation of "counter-environments" where the method might just as well be called counterenvironmental analysis. As McLuhan (1964) reasoned:

> As our proliferating technologies have created a whole series of new environments, [humans] have become aware of the arts as "anti-environments" or "counter-environments" that provide us with the means of perceiving the environment itself…. Art as anti-environment becomes more than ever a means of training perception and judgment. (p. ix)

In effect, literary theorists played out another dramatic 'battle against environment;' instead of heredity or reason versus environment it was now art versus environment. At the same time that McLuhan (1964, p. 66) documented and propounded the process of "translating nature into art," environmentalists advocated the reverse— translating art and technology back into nature— along with conserving nature as nature. Conservationists' longstanding method of environmental analysis manifested as "environmental critique" in the 1960s and 1970s. As the "conservation movement evolved into environmentalism and ecology, the streams of consciousness and political activism broadened and deepened:"

> The shallower streams are concerned exclusively with what economists like to call the "externalities" of continued, rapid economic development— air and water pollution, "side effects" of the use of herbicides and pesticides to "enhance production" of commodities used by humans. The deeper questioning asks the place of [humans in nature, i.e., "deep ecology"]. (Devall, 1981, p. 178)

Carson's (1962/2002) *Silent Spring* is the bellwether and standard. She observed the same phenomena as McLuhan but offered a much different analysis: "Only within the moment of time represented by the present century has one species— [hu]man— acquired significant power to alter the nature of [t]his world. During the past quarter century this power has not only increased to one of disturbing magnitude but it has changed in character" (p. 4). *Silent Spring* stands as a model environmental analysis of the agricultural-biological-industrial complex.

Environmental critique aside, environmental analysis within the sciences is interchangeable with ecological analysis, ecosystems analysis, or natural analysis. The connotation is natural site analysis or impact analysis prior to, during, or post-invasive practice. In which case, an environmental analysis establishes an audit or baseline for decision-making, monitoring, planning, preservation, or restoration. Some forms of technology assessment (TA) double as

environmental analysis. For analysis, nature is commonly defined as the world unprocessed (i.e., parts and whole of organic and inorganic [unprocessed] energy, forces, and matter).

Williams (1976/1983) cautions against simplifying the concept of "nature," "given the fundamental importance of the processes to which it refers" (p. 224). He defines "environment" as "the conditions, including the physical conditions, within which someone or something lives and develops" but excludes it from the influential *Keywords* (p. 217). The *Dictionary of Untranslatables* (Cassin, 2004) follows in giving nature complex play while excluding environment. In *Politics of Nature*, Latour (1999/2004) makes the same mistake in finding the pluralization of nature/s and multinaturalism to be rare and unique while overlooking the common, longstanding pluralization of environment/s. If "nature is perhaps the most complex word in the language" (Williams, 1976/1983, p. 219), then environment is among the most taken for granted.

We tend to forget that environment is a post-Darwinian evolution concept proposed to compensate for a fairly passive and patient nature. Darwin (1859) refers to nature 268 times but does not refer at all to environment in *On the Origin of Species*. Nor does environment appear in either volume of *The Descent of Man* (1871). More than just circumstance, condition, or surrounding, as Williams indicates, environments are active and reactive. But environment also made culture more active as environmentalism began to mean taking a side of nurture in the nature-nurture debate. As a result, nature-nurture would be more aptly dubbed nature-environment-nurture, as environment synthesized nature and naturalized culture in specific ways.

There are abundant examples of environmental analysis in cultural settings. For instance, Zhao and Frank (2003) premise their ecological analysis of uses of technology:

> To construct a unifying ecological framework that is useful in an analysis of technology uses, we need first to establish four metaphorical equivalents: (a) Schools are ecosystems; (b) computer uses are living species; (c) teachers are members of a keystone species; and (d) external educational innovations are invasions of exotic species. (p. 811)

Similarly, economists routinely refer to "business environments" and rely on forms of environmental analysis for strategic management and policy. Eventually, business environments and school environments have to countenance natural environments but greening 'business as usual' is merely a way of tinkering with challenges of sustainability. Environmental analysis of an individual's or organization's "ecological footprint" is constructive for establishing accountability to natural environments (Wackernagel & Rees, 1996). Ecocriticism (e.g., green cultural criticism) often faces similar challenges to establish depth of environmental analysis.

Seemingly insatiable appetites for consumption of natural resources driven by economic ambition and desire necessarily leave environmentalists wary of analysis without commitments to action starting with the analyst's lifestyle. Given climate change, collapse of ecosystems, deforestation, environmental racism, extinction of species, genetic manipulation of animals and plants, privatization of air, land, and water rights, and a variety of technological threats, environmental analysis should be readily intuitive. Canada's record of environmental racism could alone be enough to anger and inspire environmental analysts to action (Tuncak, 2020).

1. What is Analysis?
   a. Pepper (1942, p. 249): Water, it is assumed, can be completely analyzed into atoms; or, if not into atoms, into electrical elements; or, if not into these, then into other elements. But that there is an ultimate and final and complete analytical constitution of water is assumed. This assumption is categorically denied by contextualism... there is no final or complete analysis of anything. The reason for this is that what is analyzed is categorically an event, and the analysis of an event consists in the exhibition of its texture, and the exhibition of its texture is the discrimination of its strands, and the full discrimination of its strands is the exhibition of other textures in the context of the one being analyzed— textures from which the strands of the textures being analyzed gain part of their quality. In the extended analysis of any event we presently find ourselves in the context of another event, and so on from event to event as long as we wish to go, which would be forever or until we got tired.
   b. Geertz (1973, p. 9): analysis, then, is sorting out the structures of signification… and determining their social ground and import.
   c. Guentchev (2018, p. 113): I use the term "analysis" broadly here, just as Langer uses the term "logic" broadly, to apply to any discernible pattern. She writes that works of art are the result of artistic analysis of feeling, presenting the logic or pattern of feeling to an audience through a sensuous medium. Just as the term "logic" is not restricted to the study of language, so I use the term "analysis" to apply to the perception of articulated patterns. When I say that the audience analyzes the pattern of a work, I mean that it becomes more sensitive to its structure. This analysis need not be a cognitive exercise of the order of art criticism.

2. What is Environment?
   a. King (1877, p. 467): When we bring geology into contact with Darwinism, it is evident that hereditivity is out of the domain of our inquiry; it is not the engine of change, it is the conservator of the past; but the companion law of adaptivity, or the accommodation to circumstances, is one which depends half upon the organism and half upon the environment; half upon the vital interior, half upon the pressure which the environment brings to bear upon it. Now, environment, as conclusively shown by biologists, is a twofold thing, a series of complicated relationships with contemporaneous life, but, besides, with the general inorganic surrounding, involving climate and position upon the globe. Preoccupied with the strictly biological environment, namely, the intricate relation of dependence of any species upon some of its surrounding species, biologists have signally failed to study the power and influence of the inorganic or geologic environment…. Darwin, Wallace, Haeckel, and the other devoted students of natural selection have brought to light the most astonishingly complex struggle for existence, everywhere progressing— the fiercest battle for life and for subsistence, for standing-room, for breath. Some species gain, others lose, some go down to annihilation. In this battle they see adequate cause for all the great, highly organized products of the millions of years since life began. From their logic, you and I are conquerors who have mounted to [hu]manhood by treading out the life of infinite generations. We are what we are because this brain and this body form the most effective fighting-machine the dice-box of ages has thrown.
   b. *Note that King's specific definition of the environment is derived from Darwin's *Origin of Species*, which does not include any mention of environment.
   c. Environment made nature active, or at least more active in the way outlined in the *Origin of Species*. As King (1877, p. 467) states, heredity (or nature) "is not the engine of change, it is the conservator of the past." But it also made culture more active, and oddly enough, was invented to oppose nature, as environmentalism began to mean taking a side of nurture in the nature-nurture debate. As a result, nature-nurture would be more aptly named nature-environment-nurture, as environment synthesized nature and naturalized culture in specific ways. As Goldenweiser (1916) noted, "the environmentalist will often agree with the anti-environmentalist that certain changes in a culture may be due, not to the influence of its

physical environment, but to certain cultural features introduced from another group; but, objects the environmentalist, these cultural features were, in their turn, produced by the physical environment of the group from which they are derived" (pp. 628-629). For this and a few additional reasons, enviornment was a preferred concept over nature through the twentieth century:
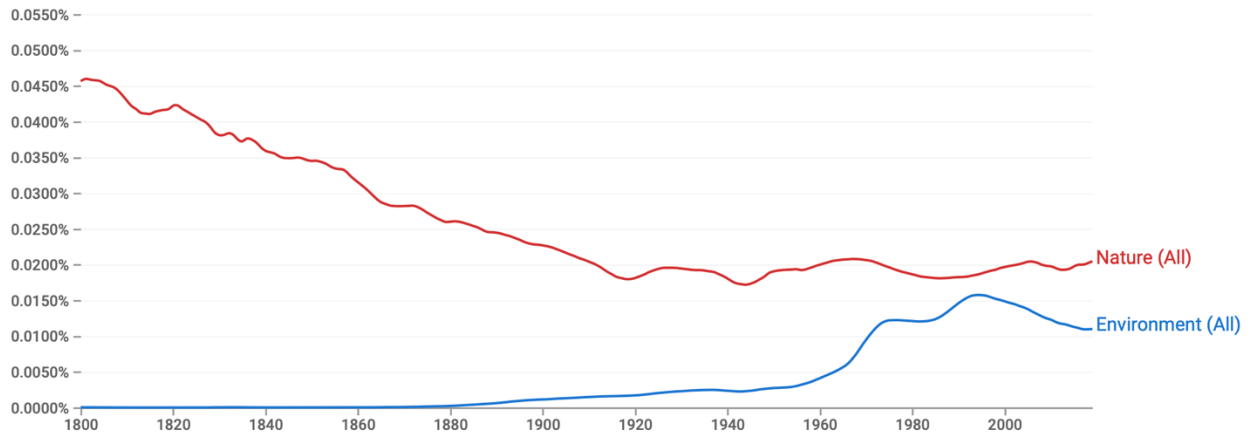

Figure 1. Ngram of Google Books database or titles that include "environment" or "nature."

    d.   Romanes (1881, p. 740): Environment— or the sum total of the external conditions of life.

    e.   Bernard (1930a, pp. 328-329): the concept of environment must be expanded to include not only the natural environment, but also a series of evolving and cumulative social or cultural environments, whose content is essentially the same as the culture… the environment to which [humans] must adjust thus becomes decreasingly "natural" and increasingly 'artificial' and 'cultural' or 'social'.

    f.   Sumner (1922, p. 225): culture medium.

    g.   Latour has for decades raised problems with nature as a very modern invention.

         i.   Latour (2010, p. 476): Nature is not a thing, a domain, a realm, an ontological territory…. [Nature is] a way of organizing the division (what Alfred Whitehead has called the Bifurcation) between appearances and reality, subjectivity and objectivity, history and immutability. A fully transcendent, yet a fully historical construct… it is a fabulously useful ploy, invented in the seventeenth century, to establish a political epistemology and to decide who will be allowed to talk about what, and which types of beings will remain silent.

        ii.   But in "<<It's Development Stupid>> or How to Modernize Modernization?" Latour confuses the environmental movement with the beginnings of environmentalism.

            a.   Latour (2007, p. 10): The word "environmentalism" thus designates this turning point in history when the unwanted consequences [of development] are suddenly considered as such a monstrosity that the only logical step appears to be abstain and repent.

        iii.   Latour (1999/2004, pp. 29, 33, 48, 219): If the term "multiculturalism" can be used with reckless abandon, the term "multinaturalism" appears— and will continue to appear for quite some time— shocking or devoid of meaning... Multiculturalism acquires its rights to multiplicity only because it is solidly propped up by mononaturalism.... Mononaturalism is not at all self-evident; it is simply one of the possible solutions to an aborted experiment in constructing a common world: one nature, a multiplicity of cultures; unity in the hands of the exact sciences, multiplicity in the hands of the human sciences.... The solution of mononaturalism stabilizes nature at the risk of emptying the notion of culture of all substance and reducing it to

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mere representations; the solution of multiculturalism stabilizes the notion of culture at the risk of endangering the universality of nature and reducing it to an illusion.... To the monster of multiculturalism has now been added the hideous specter of multinaturalism. The science war has become once and for all a war of the worlds.

3. **What is Nature?**
   a. Diogenes Laertius (ca. 250, 7.148): Now the term Nature is used by them [i.e., Stoics and students of Zeno] to mean sometimes that which holds the world together [τὴν συνέχουσαν τὸν κόσμον], sometimes that which causes terrestrial things to spring up. Nature is defined as a force moving of itself, producing and preserving [ἀποτελοῦσά τε καὶ συνέχουσα] in being its offspring in accordance with seminal principles. (Trans. R. D.Hicks) http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.01.0257%3Abook%3D7%3Achapter%3D1
   b. Humboldt, *Cosmos* (1844/1849, p. 412): It is a characteristic of the poetry of the Hebrews, that as a reflex of monotheism it always embraces the universe in its unity, comprising both terrestrial life and the luminous realms of space. It dwells but rarely on the individuality of phenomena, preferring the contemplation of great masses. The Hebrew poet does not depict nature as a self-dependent object, glorious in its individual beauty, but always as in relation and subjection to a higher spiritual power. Nature is to him a work of creation and order, the living expression of the omnipresence of the Divinity in the visible world.
      i. It is characteristic of it, that, as a reflex of monotheism, it always embraces the whole world in its unity, comprehending the life of the terrestrial globe, as well as the shining regions of space. It dwells less on details of phenomena, and loves to contemplate great masses. Nature is portrayed, not as self-subsisting or glorious in her own beauty, but ever in relation to a higher, an overruling, a spiritual power.
   c. Baldwin (1910, pp. 339-340): Quite different [than the Greek] was the Hebrew view of the relation of Nature to God. To the Hebrew God was the primary reality; Nature was secondary. Not only was it true that without him was not anything made that was made, but the continued existence of Nature was dependent on his will. The Hebrew thought of Nature as a mere shadow, finding the essence of its beauty as well as the sustaining power of its life in One whose providential care watched over the great things and the small— who brought forth Mazzaroth in his season and provided for the raven his food.
   d. Collingwood (1968, pp. 43, 44): in modern European languages the word 'nature' is on the whole most often used in a collective sense for the sum total or aggregate of natural things. At the same time, this is not the only sense in which the word is commonly used m modern languages. There is another sense, which we recognize to be its original and, strictly, its proper sense when it refers not to a collection but to a 'principle', again in the proper sense of that word, a *principium*, *αἰτία*, source [or force].... The word *φύσις* [physis] is used in Greek in both these ways, and there is the same relation between the two senses in Greek as there is between the two senses in English. In our earlier documents of Greek literature, *φύσις* always bears the sense which we recognize as the original sense of the English word 'nature'. It always means something within, or ultimately belonging to, a thing, which is the source of its behaviour. This is the only sense it ever bears in the earlier Greek authors, and remains throughout the history of Greek literature its normal sense.
   e. Williams (1976/1987, p. 219): **Nature** is perhaps the most complex word in the language. It is relatively easy to distinguish three areas of meaning: (i) the essential quality and character of something; (ii) the inherent force which directs either the world or human beings or both; (iii) the material world itself, taken as including or not including human beings. Yet it is evident that within (ii) and (iii), though the area of reference is broadly clear, precise meanings are variable and at times even opposed. The historical development of the word through these three senses is important, but it is also significant that all three senses, and the

main variations and alternatives within the two most difficult of them, are still active and widespread in contemporary usage. Nature comes from fw *nature*, oF and *natura*, L, from a root in the past participle of *nasci*, L — to be born (from which also derive *nation*, *native*, *innate*, etc.). Its earliest sense, as in oF and L, was (i), the essential character and quality of something.

f. Wohlwill (1983, pp. 6-7): The term *nature* is among the more ==elusive and vaguely defined concepts== in our vocabulary. At one extreme, it appears to inc1ude the domain of both the life sciences and the physical sciences— that is, the broad range of phenomena that conform to the laws of matter and energy (as contrasted on the one hand with the domain of social and behavioral science and on the other with the realm of the *super*natural, the mystical, and the *meta*physical).… We come, finally, to the term *natural environment*, which is most relevant to the theme of this volume. This is the vast domain of organic and inorganic matter that is not a product of human activity or intervention. It is, in other words, ==defined largely by exclusion==. It deals with the landscape rather than with the built environment. It includes the world of rock and sand, of shoreline, desert, woods, mountains, etc., and the diverse manifestations of plant and animal life that are encountered there. It excludes the man-made world: our cities and towns, our houses and factories, along with the diverse implements devised by mankind, for transport, recreation, commerce, and other human needs.

g. Serres (1992, p. 18): Every contract creates a set of bonds, whose network canonizes relationships; today nature is defined by a set of relationships whose network unifies the entire Earth; the natural contract connects the second to the first in another network.

h. Visvader (1996, p. 16) In one sense, there is no such thing as nature for it generally refers to whatever is left over when we subtract humans and the products of human actions from the realm of things and happenings.... Whether it is easily characterizable or whether all of its parts act uniformly enough to allow meaningful descriptions of the whole collection are highly questionable. Yet the realm of the "what's left over" is almost universally reified and regarded as a unified whole with definite properties. Each culture will give it characteristics which will suggest the kinds of attitudes and relationships that are appropriate. The boundary drawn between humans and nature is highly permeable, for though nature is defined in contrast to the hu man, the human world needs to be located somewhere within the natural. Often nature will be seen to share highly desirable characteristics with humans, ones that have perhaps been sub merged by the constraints of civilization. In Chinese civilization, dominated by highly ritualized Confucianism, nature was referred to as "the spontaneous" and was seen in general as the model of effortless creativity. In our own highly organized and rationalized society, nature has become valued as a model of the wild and unorganized, and an important representation of the unplanned.

i. Ellen & Fukui (1996, p. 224): The ease with which it is possible to demonstrate the cultural relativity of nature in science and folk science, and the complex problems raised by the blurring of nature and culture in modern studies of domestication should not lead us to underestimate the plausibility of scientific claims of individual and population adaptation, and the necessity in such models to accept some working definition of the environment or nature as being 'out there'. The more extreme forms of post-modernism negate the possibility of studying how people relate to their physical and social surroundings using scientific methods capable of leading to generalizations— given that each cultural construction is unique and non-comparable. In their less extreme forms, they still tend to privilege individual constructions above the social, cultural and population level of analysis.

j. Castree (2001, p. 3): In light of this, a fast-growing cohort of human geographers have argued for approaches to the society-nature interface that are broader and deeper than that offered by the 'people and environment' tradition. The 'ecocentric' or nature-first approach urges a fundamental respect for, and need to get back to, nature. This is to be achieved through a profound critique and dismantling of existing systems of production and consumption. This

way of thinking has grown out of the now popular 'green movement,' whose influence in many Western and several non-Western nation-states has grown enormously since the early 1970s. It's a way of thinking that can be contrasted with the third approach to society-nature relations currently extant in geography, the one that is the subject of this book. This approach— which is increasingly popular and influential among critical human geographers— sees nature as inescapably social. Here the argument is that nature is defined, delimited, and even physically reconstituted by different societies, often in order to serve specific, and usually dominant, social interests. In other words, the social and the natural are seen to intertwine in ways that make their separation— in either thought or practice— impossible.

k. Cassin, Apter, Lezra, & Wood (2014, p. 703): The Latin translation of the Greek *phusis* [φύσις] by the Latin natura, from which are derived most of the words designating "nature" in European languages, can be considered an inconsequential event in Western history— or, on the contrary, a major event— with great historical import. Heidegger never ceased to problematize this translation as it had never been problematized before, though that led him to render the Greek *phusis* as *Aufgang*, "opening up," "emergence," rather than by *Natur*, "nature." To gauge the significance of Heidegger's gesture we must, however, move beyond the pseudo-opposition between a supposedly Greek nature-growth and a supposedly Roman nature-birth. Setting himself the task of determining *phusis* as the movement of a thing's coming to be by itself (whence physics), Aristotle turns first to etymology to make this term signify in its original sense:

   i. "Nature" [*phusis*] means (1) the genesis [*genesis* (γένεσις)] of growing things [tôn *phuomenôn* (τῶν φυομένων)]— the meaning that would be suggested if one were to pronounce the *u* in *phusis* long. (*Metaphysics*, 5.4. 1014b 17-19)

l. Donnell (2015, p. 66): Nature is defined as encompassing all living and non-living things that originate on planet Earth, that are not human-made and occur without human intervention, such as oceans, humans, trees, wildlife, and rocks.

4. What is Ecology?

   a. Ecology, like economics, is rooted in the Greek *oikonomos*, or knowledge of the household— not only individual houses but the household of Gaia. From Greek *oikos* "house, dwelling place, habitation."

   b. Ernst Haeckel (1866/1873), in the *Morphology of the Organism*, first defined Ökologie as "the comprehensive science of the relationship of the organism to the environment"

   c. *Encyclopedia Americana* (1923, p. 555): That phase of biology that considers plants and animals as they exist in nature, and studies their interdependence, and the relation of each kind and individual to its environment.

   d. Renner in *Geography: An Introduction to Human Ecology*, deriving from Barrows' (1922) "Geography as Human Ecology," substitutes a definition of geography ("man's adaptation of nature") for that of human ecology: "man's adjustment to his natural environment."

   e. Tansley (1935, p. 299): [ecosystem means] the whole system (in the sense of physics), including not only the organism-complex, but also the whole complex of physical factors forming what we call the environment of the biome-the habitat factors in the widest sense. Though the organisms may claim our primary interest, when we are trying to think fundamentally we cannot separate them from their special environment, with which they form one physical system.

   f. Heberle (1952, p. 3) uses "political sociography" and "political ecology" interchangeably to mean "not merely the spatial distribution of people and of their cultural works but the interrelations between various types of people and between social action patterns and social institutions."

g. Petrina (2000, p. 213): Political ecology includes shades of green perspectives on decentralised, co-operative and community-based economics, a revolution in ecological consciousness, and a redistribution of profits toward conservation and egalitarianism. Ecological consciousness generally means acting sensibly toward the interconnectedness of culture, nature, and sustainability. Sustainability refers to the "limitations imposed by the ability of the biosphere to absorb the effects of human activities." (Madge (1997, p. 51). Sustainable living means that we meet our present need without compromising our future generations' abilities to meet their needs.

5. What is Environmental Analysis?
    a. Yengoyan (1966, pp. 105, 106): Ecological analysis in anthropology has commonly dealt with the relations of socio-cultural systems to their external environments. This broad form of inquiry has come to be known as "cultural ecology". The early twentieth century viewpoints of environmental determinism in geography and diffusion- ism in American ethnology, which regarded the environment as a limiting factor in cultural development, have given way to more exacting and inductive investigations into the particular physical, natural and social networks which delimit or co-determine particular cultural phenomena. Many concepts employed in contemporary studies are borrowed from biological ecology. Constructs such as "eco-system", "ecological niche", "community", and "equilibrium" are analytical tools in investigating the intricate ties between man and his external surroundings.... At least two modes of ecological analysis appear as dominant and supposedly conflicting positions. One approach seeks paired relationships between aspects of cultural phenomena and certain environmental factors.... An alternative mode of analysis deals with systems in relation to other systems. The focus is on the ecosystem. Here one asks how the system is structured, how does it function, and what are the mechanisms of articulation between the ecosystem and the social system, diachronically and synchronically. Whereas the "one-to-one" approach assumes a one-way process from environment, technology, economy to the "rest of culture," the eco-system approach allows analysis of feedback from the political, intellectual and religious aspects to economic institutions and the environment.
    b. Willard (1975, pp. 236-237): seven basic principles of ecology:
        i. Interrelationships
        ii. Ecosystems and Niches
        iii. Material Cycling and Energy Flow
        iv. Limiting Factors
        v. Carrying Capacity
        vi. Ecosystem Development
        vii. Specialization, Diversity, Stability
    c. Wackernagel & Rees (1996, p. 9): Ecological footprint analysis is an accounting tool that enables us to estimate the. resource consumption and waste assimilation requirements of a defined human population or economy in terms of a corresponding productive land area. Typical questions we can ask with this tool include: how dependent is our study population on resource supports from "elsewhere" and on the waste assimilation capacity of the global commons?, and will nature's productivity be adequate to satisfy the rising material expectations of a growing human population into the next century?

6. Anti-Environments and Counter-Environments
    a. Leavis & Thompson (1933, pp. 4-5): An education that conceives seriously, its function in the modern world will, then, train awareness (a) of the general process of civilization indicated above, and (b) of the immediate environment, physical and intellectual— the ways in which it tends to affect taste, habit, preconception, attitude to life and quality of living. For we are committed to more consciousness; in that way, if any, lies salvation. We cannot, as we might in a healthy state of culture, leave the citizen to be formed unconsciously by [her or]

his environment; if anything like a worthy idea of satisfactory living is to be saved, he [she or they] must be trained to discriminate and resist.

    b. McLuhan (1964, pp. ix-x): As our proliferating technologies have created a whole series of new environments, men have become aware of the arts as "anti-environments" or "counter-environments" that provide us with the means of perceiving the environment itself. For, as Edward T. Hall has explained in The Silent Language, men are never aware of the ground rules of their environmental systems or cultures. Today technologies and their consequent environments succeed each other so rapidly that one environment makes us aware of the next. Technologies begin to perform the function of art in making us aware of the psychic and social consequences of technology. Art as anti-environment becomes more than ever a means of training perception and judgment. Art offered as a consumer commodity rather than as a means of training perception is as ludicrous and snobbish as always. Media study at once opens the doors of perception.

    c. McLuhan (1967, p. 165): If the planet itself has thus become the content of a new space created by its satellites, and its electronic extensions, if the planet has become the content and not the environment, then we can confidently expect to see the next few decades devoted to turning the planet into an art form. We will caress and shape and pattern every facet, every contour of this planet as if it were a work of art, just as surely as we have put a new environment around it. I think the computer is admirably suited to the artistic programming of such an environment, of taking over the task of programming the environment itself as a work of art, instead of programming the content as a work of art. This situation suggests some considerable changes in the human state. It suggests that the role of art in the past has been not so much the making of environments as making of counter-environments or anti-environment.... One overall consideration for our time is to consider how, in the past, the environment was invisible in its operation upon us. Environments are not just containers, but are processes that change the content totally. New media are new environments. That is why the media are the message. One related consideration is that anti-environments, or counter-environments created by the artist, are indispensable means of becoming aware of the environment, in which we live and of the environments we create for ourselves technically.... So, the artist, as a creator of anti-environments or counter-environments, created to permit perception of environments, has a very peculiar role in our society.

7. Environmental Critique

    a. Carson (1962/2002, p. 218): With the dawn of the industrial era the world became a place of continuous, ever-accelerating change. Instead of the natural environment there was rapidly substituted an artificial one composed of new chemical and physical agents, many of them possessing powerful capacities for inducing biologic change.

8. Environmental Racism

    a. Tuncak (2020, p. 21): It was clear from the visit that many communities in Canada continue to be exploited by toxic exposures. Some key concerns that persist include the limited degree of protection of human health and ecosystems under various legislations, and the lack of environmental information and monitoring in areas of high risk. Long delays or absences of health impact assessment persist for affected communities. Inadequate compliance with and enforcement of laws and policies, and other systemic obstacles to access to justice, in particular for cases of health impacts due to chronic exposures, reinforce the recalcitrance to ensure that victims can realize their right to an effective remedy…. The prevalence of discrimination in Canada's laws and policies regarding hazardous substances and wastes is clear. There exists a pattern in Canada where marginalized groups, and Indigenous peoples in particular, find themselves on the wrong side of a toxic divide, subject to conditions that would not be acceptable elsewhere in Canada. A natural environment conducive to the highest attainable standard of health is not treated as a right, but unfortunately for many in Canada today an elusive privilege. http://www.srtoxics.org/resources/reports/canada/