AESTHETIC QUALITY OF THE BUILT AND NATURAL ENVIRONMENT: WHY DOES IT MATTER?

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The AESOHP programme has evolved from work for the WHO, undertaken particularly during 1993-1996 in preparation of the first draft of the book, WHO Recreational Water and Bathing Beach Quality Guidelines, presented at the WHO Consultation on Health Impacts of Recreational Water and Bathing Beach Quality, Bad Elster, Germany, 20-22 June 1996, and on lectures on the aesthetic aspects of health and environmental quality requested for the WHO Expert Consultation on the Development of the WHO Guidelines for Safe Recreational Water Environments, Jersey, Channel Islands, 22-27 May 1997, the WHO European Conference on Travel Medicine, Venice, Italy, 25-27 March 1998, the UNESCO sponsored First World Urban Congress on Urban Environment and Health, Madrid, Spain, 5-8 July 1998, the WHO European Conference, Green Cities, Blue Cities of Europe, Forli, Italy, 12-14 October 2000, the Nuffield Trust, UK Windsor I & II Conferences on the Arts and Humanities in Medicine, 12-13 March 1998 and 6-7 September 1999, and the International Conference on the Arts in Health Care: Learning from Experience, London, 11-13 September 1997.

INTRODUCTION:

Environmental values, economic well-being and personal health are interdependent (Handszuh, 1991). The WHO definition of health addresses this interdependence. It "*represents a balanced relationship of the body and mind and complete adjustment to the external environment*" (Howe and Lorraine, 1973). Moreover, WHO defines environmental health as "*comprising those aspects of human health including qualities of life that are determined by chemical, physical, biological, social and psychosocial factors in the environment. It also refers to the theory and practice of assessing, correcting and preventing those factors in the environment that can potentially affect adversely the health of present and future generations. This definition articulates the desire to include elements of quality of life, and psychosocial and sustainable development issues within the sphere of environmental health"* (Editorial, 1995).

The WHO European Charter on Environment and Health, 1989, addresses these relationships. It states that "*good health and well-being require a clean and harmonious environment in which physical, psychological, social and aesthetic factors are all given their due importance*". The charter addresses 'entitlements', 'rights' and 'responsibilities' of the public for environmental health and personal happiness (WHO, 1989). They are interdependent and the basis of environmental economics and eco-audit (Shrader-Frechette, 1991). Linked to these developments, the concept of '*Psychological Conservation Areas*' in inner city urban environments has been proposed (Petherbridge, 1987). In Eastern Europe, the term '*ecosophy*' has been introduced to describe the need to adapt behaviour according to the local ecosystem for physical and psychological well-being (Ungureanu, 1998). The same author reasoned recently that, for our personal health, *'ecosophy'* and *'ecotherapy'* should be used to *"harmonise ourselves with ourselves and with nature",* and that through *ecosophy and ecoeducation the human being learns to respect nature, society and the ethical sense of life"* (Ungureanu, 2000). A new discipline, 'aesthetic medicine' has even been proposed to address the interdependence of these factors (Kovacevic-Cabrijan, 1988). It differs from aesthetic plastic surgery which deals with changes to bodily appearance (Holm, 2000).

It seems worthwhile to now consider additional ways of encouraging the links between morals, personal ethics, art, aesthetics and environmental health. The WHO 'Health for All' programme for example, endorses student-centred learning and places emphasis on empowering people with the means to help improve their ways of perceiving life and aspects of their lifestyles (WHO, 1988a). 'Respect for All' is implicit in this programme (Philipp, 1996a). Settings suggested by WHO for local health action include neighbourhoods, schools, hospitals, workplaces, cities, villages and islands (Philipp et al, 1999a). The need to provide

environmental opportunities in them for improved aesthetic experiences is recognised (Giroult, 1988; Velimirovic, 1988; Diomidis, 1990). Environments with high aesthetic quality provide pleasurable places to be for contemplation, personal reflection, enjoyment, relaxation and replenishing the soul. They also help to encourage a healthy personal outlook (Philipp et al, 1999a). A need for new training materials on the aesthetic aspects of housing and human settlements has been identified, at least amongst members of the WHO Rural and Urban Development and Housing Network (Philipp and Wood, 1992). Improved and wider understanding is however needed of what is intended by the word '*aesthetics*', (defined in the Oxford Dictionary as '*having an appreciation of the sense of beauty in accordance with the principles of good taste*'). The aesthetic response also involves emotions that include being '*uplifted'*, '*moved*'*,* 'exhilarated*',* and '*entranced'* (Eaton, 1995). '*Aesthetic*' therefore implies the presence or possession of qualities that are pleasing to the senses.

"The word 'aesthetics' derives from the Greek 'aisthanesthai' (to perceive), and 'aistheta' (things perceptible), as contrasted with things immaterial ... Indeed, the notion of beauty seems deeply imbedded in our conception of aesthetics. The question 'what is beauty?' has been at the centre of aesthetic theory since Classical Greece. Plato, for example, ruled that form, rather than content, made a work of art beautiful, and asserted that beauty was independent of truth or usefulness. His pupil Aristotle was convinced that the three essential components of beauty were wholeness (integras), harmony (consonantia) and radiance (claritas). The notions of balance, harmony, proportion, and order, and the concepts of the Golden Mean and 'nothing in excess' also emerged from this cultural source ... Aesthetic distinctions, then, were to be made on the basis of felt experience ... By the late twentieth century, (however), *even aesthetic philosophers had all but forgotten that aesthetics once dealt with nature as well as human artefacts"* (Porteous, 1996).

To help develop the research and educational projects that need now to be undertaken for associations of health and aesthetics, 'aesthetic quality of an environment' has been defined as: *"the extent to which an external factor or combination of factors evokes a pleasurable emotional response from the stimulation of our five bodily senses of sight, sound, smell, taste and touch. This response establishes a resonance within ourselves and with the external factors responsible for that stimulation. Resonance helps to promote positive affirmation of ourselves, enhances our well-being and encourages positive identity with the causal environmental factors"* (Philipp et al, 1999a). Indeed, consciousness is thought to embody itself with an overwhelming sense of oneness with nature in which the exuberant sense of physical well-being is a physiological reality. Experience too, is perceived in the imagination (Rothschild, 1994). External sensory stimuli, it is thought, could release natural opiates, the

endorphins and enkephalins, in localised areas of the brain (Denton, 1993). One author has even suggested that: "*As we exploit the world and destroy its beauty we are doing the same to our human spirit*" (Mosley, 1994).

"T*o quote Byron from 'Childe Harolde's Pilgrimage',*

There is a pleasure in the pathless woods,
There is a rapture in the lonely shore,
There is a society, where none intrudes,
By the deep sea, and music in its roar:
I love not man the less, but Nature more,
From these our interviews in which I steal
From all I may be or have been before,
To mingle with the Universe, and feel
What I can ne'er express, yet cannot all conceal"
(Denton, 1993).

The humanistic psychologist, Maslow, went further and described '*peak experience*' as a feeling of deep, complete correspondence between inner state and outer landscape. It has been interpreted as '*spiritual ecology'* (Porteous, 1996).

In exploring and building now on what the WHO European Charter on Environment and Health and the WHO 'Health for All programme have established, it should be recollected that the essence of being human is the conscious exploration of thinking. Accordingly, it is important for us to not just think about, but to act on the words of Gro Harlem Brundtland, Director General of the WHO. She has noted that: "*George Bernard Shaw said that the only thing we learn from experience is that we do not learn anything from experience ... we have learnt much from experience. I believe we can learn even more, and move on to prove George Bernard Shaw wrong"* (Brundtland, 2000).

THE CONTRIBUTION OF PHILOSOPHY TO EXPLORING AESTHETIC HEALTH ASPECTS OF THE ENVIRONMENT:

The Gaia hypothesis:

The modern-day Gaia hypothesis of mankind's oneness with nature derives from Gaia, the Greek goddess of the earth. It regards the planet itself as a single living organism with inextricably interdependent parts (Denton, 1993). One of its goals "*is to develop in the average citizen an attachment to the earth as the home of humankind, a traditional geographical concept that took wing, once again, with the first views of the earth as a whole, from space, in the late 1960's*" (Porteous, 1996). A related psychoanalytical view is that "*the human experience of dependence upon both mother and nature stirs powerful unconscious*

feelings that find expression in attitudes held towards the natural environment, including landscapes and gardens" (Ely, 1995).

Intriguingly too, there is an ancient Polynesian creation myth which holds that, in the beginning, there were only waters and darkness. The supreme God, Io, then, it is reported, "*spoke and said: 'Let the waters be separated, let the heavens be formed, let the earth be!' And, because of these words, creation came into being"*. In the cultures which drew upon this myth, the idea developed apparently that words were very important in ordering of life's events. Since peace and order were initially separated from chaos by words, words were (and are) still always needed to do the same task. Hence, for these cultures, poets and others who could bring the right words to an occasion had a very sacred and important function. Words were needed to either heal, redeem, bring order to, or properly celebrate the occasion. The role of the poet, seer, and songwriter was for them a sacred one and their lack of inspiration or inability to link what was happening to what had once happened at the origins of history were considered as much of a calamity as was famine, disease, and disaster in war (Rolheiser, 1995).

More generally, it has been noted that: "*a basic human need ... is for relatedness, and this includes the relatedness to the earth in the shape of gardening, hunting, walking, and other pursuits. Such a positive relationship with the earth is likely to improve relationships with other people. But to improve our earth relationships, we must first learn to see ... The main need is to learn to see well, and for this environmental and aesthetic education is required. Visual education has three conditions. First, a sharpening of our perceptions, an enlarging of our range of vision beyond the merely functional. Second, a heightening of our sensibilities which must currently be quite dull because otherwise we would not tolerate so much environmental ugliness. Third, there must be a realisation that the vision of the artist has as much validity as that of the scientist ... Having learned to see, we must then learn to critique*" (Porteous, 1996).

Nevertheless, a widespread, traditional view of mankind is that: " '*Homo' owes his title 'sapiens' to the belief that he can control his environment. History shows* (however) *that as he controls it in one direction, new problems appear elsewhere as if to remind him of his fallibility"* (Macara, 1966). Indeed, much of the '*living'* within and between cultures, and in different personal, social and physical environments, is devoted to addressing issues arising from the tensions between '*individual freedom'* and '*collective responsibility'* - the need to simultaneously conform with expectations of the peer group and to affirm one's individuality and personal integrity. A '*balance*' between the two competing points of view is essential to help achieve what the Hellenistic Greeks such as Aristotle, in exploring questions of ecology and organic unity, called '*ataraxia*' (inner peace). It is closely associated with '*eudaimonia'* (a feeling that reflects a

combination of well-being, happiness, contentment, pleasure and satisfaction and of living the best life possible) (Westra and Robinson, 1997).

The Greeks and since:
In exploring what is apparently opposite and apart, Pythagoras spoke of the separatism, dualism and relationship between the spirit and the mind. He suggested that the mind as much as feelings needs continuous realignment (Philipp, 1999). Aesop, a 6th Century BC Greek author, believed that: '*Outside show is a poor substitute for inner* worth'. Stobaeus, the 5th century AD anthologist, also noted that: "*Happiness does not reside in cattle or gold; the soul is the dwelling-place of one's good or evil genius"* (Kirk and Raven, 1962).

Although Descartes later, in the 17th century, described a dichotomy of matter and body on one hand and consciousness and spirit on the other hand (Rothschild, 1994), he considered the interplay between the two an essential aspect of human nature and was well aware of its implications for medicine (Capra, 1983). The English poet, William Wordsworth, brings the two sides together and asks:

Who is the happy warrior? Who is he
That every man in arms would wish to be?
(Ross, 1963).

From concepts such as these the notion has arisen that "*the most effective approach to preserving environmental integrity must involve some form of enlightened self-interest to guide our behaviour in the natural world"* (Westra and Robinson, 1997). Moreover, in the 19th century, '*hedonism*' had emerged; a view that all behaviour is determined by the anticipation of pleasure or pain (Piddington, 1931). Yet, although the theory behind awarding '*hedonic damages*' for the loss of enjoyment of life is nowadays generally accepted, the concept and methods of valuing it remain highly speculative and subjective (Manning, 1993).

The Athenian philosopher, Pericles, 500-429 BC, had explored these sorts of concepts and defined health as "*the state of moral, mental and bodily well-being which allows one to meet every crisis in life with amiable dignity"* (Stanwell-Smith, 1994). Herodotus said too, in the 5th century BC, "*When the body is seriously deranged it is not surprising that the mind is also"* (Denton, 1993). In addition, the chief purpose of the Hippocratic treatise '*Airs, Waters and Places*' was to help doctors anticipate the different types of diseases that are likely to occur in cities with different geographical and physical conditions (Lloyd, 1978). Over the centuries there have, however, been swings of opinion for the relative importance of factual knowledge and the impact of emotion; the more open people are to their emotions, the more skilled they are in appreciating feelings (Philipp et al, 1999b; Ross, 1963). The capacity of

knowing how another feels refers back to the original Greek word, '*empatheia'* - 'feeling into', a term used initially by theoreticians of aesthetics for the ability to perceive the subjective experience of another person (Goleman, 1996). But, aesthetics also refers to beauty.

Beauty and the poetic description of environmental quality:
Beauty, it has been suggested: "*is that which the heart embraces and the mind is stunned by. It is this very stunning of the cerebral processes that not only marks authentic beauty but is also the reason why so little can be said in 'logical' or structuralist terms about it"* (Critchlow and Allen, 1994).

The enigma, but worth, of beauty has long been noted. Ecclesiastes 3.11 tells us that "*He hath made everything beautiful in His time: also He hath set the world in their heart, so that no man can find out the work that God maketh from the beginning to the end"*. In the words of Goethe: "*We should do our utmost to encourage the Beautiful, for the Useful encourages itself"* (Porteous, 1996). Both Plato and Tolstoy believed too that the kind of art we are exposed to can affect the kind of people we become (Sheppard, 1987).

Poetry is one example of using the arts to explore the appreciation of beauty, environmental questions and issues facing mankind. It can be used by people to evoke emotion and imagery remote from their day to day experience and to thereby help increase control over their internal environment and at the same time decrease the feeling of loss of control over aspects of the external environment. It has for example, been suggested, somewhat poetically, that in contemporary urban life access to a park, "*answers to a psychological need in all of us ... is a 'work of art' ... and a representation of the state of nature ... It is a representation which we may experience, a re-creational space in which we can walk and breathe and play ... The experiment, is this: "to see what happens when we regard poems as imaginary parks in which we may breathe an air that is not toxic and accommodate ourselves to a mode of dwelling that is not alienated"* (Bate, 2000).

Poetry has been likened to medicine in that it explores aspects of communication, and because "*the poet, using words as tools, demonstrates and communicates mankind's awareness of the complexity of the human situation. Like the physician, the poet tries first to grasp, then to control, the reality of the human predicament"* (Mathiasen and Alpert, 1980). Medicine and poetry were too, seen by the ancient Greeks as having a common source of inspiration; to some extent because in antiquity healers and poets were widely assumed to possess some sort of magical power (Bax, 1989). They shared the same god, Apollo. The links continue in, for example, neuropsychology, where the neocortex of the human forebrain has been described as the thinking brain, of which: "*the left hemisphere is Apollonian; verbal, mathematical, logical,*

deductive, and oriented towards the external environment ('outward bound'), whereas the right hemisphere is Dionysian: holistic, intuitive, spatial, pattern-recognising, and concerned with inner spaces ('inward bound') (Porteous, 1996).

The associations of medicine and poetry, and of health with aesthetic appreciation of the natural environment, are well-expressed by the English poet, William Wordsworth, in his poem, 'An Evening Scene'. He entices us with the words:

"Come forth into the light of things,
Let nature be you teacher.
She has a world of ready worth,
Our minds and hearts to bless -
Spontaneous wisdom breathed by health".

He ends this poem with a plea for the natural environment:

"Sweet is the lore which nature brings
Our meddling intellect
Misshapes the beauteous forms of things;
We murder to dissect";

and implores each of us to think and act for our own well-being:

Enough of Science and of Art:
Close up those barren leaves;
Come forth, and bring with you a heart
That watches and receives.

Natural beauty can be found in many forms. For example, people make trips to visit landscapes they regard as especially beautiful (Sheppard, 1987). It seems that rhythm and patterns of the blending of shapes, lines, size, colour, texture, light, space and sound in components of the landscape and built environment can give a sense of harmony, balance and proportion, and a hypnotic fusion and flow of form that help to give many people a feeling of peace and inner tranquillity (Snyder, 1930; Storr, 1991; Critchlow and Allen, 1994). Beauty and visual harmony in natural phenomena were, for the ancient Greeks, the most expressive revelation of the divine (Rothschild, 1994). *"Truth, Goodness and Beauty (or Strength, Utility and Grace, as they were re-stated by Vitruvius in Roman times), are the three co-necessary values which, according to the Socratic tradition, lead to Harmony. These values have been the underlying perennial wisdom for the western world for three millennia"* (Critchlow and Allen, 1994).

This underlying philosophy is the basis for much conservation work, ecological (or *'green'*) tourism, and preservation of our National Parks,

Maritime and Forest Parks, gardens and wilderness area. It has been reported that *"both art and natural beauty have value in themselves ... Enriching our aesthetic experience goes together with developing our powers of imagination and understanding ... If we develop our ability to respond to art we shall develop our potential as human beings"* (Sheppard, 1987). Albert Einstein is even reported to have said that: *"Good imagination is more important than knowledge"* (Macara, 1997). Much earlier, Plato had written in 'The Republic', "*Let our artists rather be those who are gifted to discern the true nature of the beautiful and the graceful; then will our youth dwell in a land of health, amid fair sights and sounds, and receive the good in everything; and the beauty, the effluence of fair works shall flow into the eye and the ear, like a health-giving breeze from a purer region, and insensibly draw the soul from earliest years into likeness and sympathy with the beauty of reason"* (Senior, 1996).

The healing beauties of nature:

The healing beauties of nature and the interdependence of pleasurable personal experience, behaviour and environmental quality were recognised clearly by Greek philosophers. Plato for example, advised us to get out into the countryside. He believed that there, while walking along some pleasant pathway and allowing the beauty of the natural surroundings to be absorbed into our consciousness, we should cultivate a gentle and even walking rhythm. Plato considered that the movements of the body would start to influence gradually the functioning of the mind (Puttock, 2000). Both Plato and Aristotle believed that "*philosophy begins in wonder*" (Bate, 2000). Perhaps this is why, in the UK, the National Trust for Places of Historic Interest and Natural Beauty in its efforts to provide public access to open countryside, has described unspoiled natural, rural environments as '*inspiring places*' (Drury, 2000). In the 4th century BC, Epictetus, a Greek philosopher, noted too that: "*Men are disturbed not by things, but by the views they take of them"* (Palmer, 1991). As the 18th century philosopher, Kant commented: "*We see things not as they are, but as we* are" (Calman, 1996). These views have been reiterated in contemporary times. At a WHO meeting in Venice in 1998, it was reported that: "*Each of us, as we move about, also carries our own 'panorama' or view of things"* (Ligabue, 1998). Elsewhere, a Japanese author noted that: "*The individual can revitalise himself when he is enlightened to the interaction between the person 'within' and the circumstances of life 'without'* (Ikeda, 1981). The English poet, W.H. Davies, brought some of these views together in his poem '*Leisure'.* It begins with the lines:

"What is this life if full of care
We have no time to stand and stare".

Health gains from tootling and doodling:

The English word '*tootle*', encapsulates aspects of this ancient and contemporary philosophy. Defined in the Oxford Dictionary as "*to move casually along*", it describes the pleasure that can be derived from using environments of high aesthetic quality to enhance personal experience. '*Tootling*' can be seen as an activity '*in which there is environmental opportunity of sufficient aesthetic quality to be able to enjoy oneself, reflect and forget the pressures of daily living, abandon oneself to the pleasures of rhythm and exercise and resonate with the beauty of the natural outdoor environment*' (Philipp et al, 2000). Children are encouraged to develop this sort of environmental understanding with, for example, '*sensory walks'*, during which they "*are alerted to underfoot sidewalk texture, pedestrian choreography, smells, sounds, weather, clothes, trees, colours, and art, and experience running, dawdling, asking the way, and the 'chance dance' of intersections. The goal is to increase awareness and provide a foundation for personal growth as well as for descriptive, analytical and experimental activities*" (Porteous, 1996).

A related activity is '*doodling*', defined by the Oxford Dictionary as "*drawing or scrawling absent-mindedly*". It is undertaken by artists, derives from similar environmental opportunities to tootling but as a sedentary activity. Doodling can be thought of as: '*the free and spontaneous expression with pen or pencil on paper of what the mind is experiencing from its connections of thoughts, feelings and emotions and when allowed to meander gently without specific purpose or intent'.* Intriguingly, and perhaps related to this point, Horace wrote in 65 BC that: *"Skilled or unskilled, we all scribble poems"* (Knowles, 1997).

Aristotle divided intellect "*into the contemplative and the calculative"*. He believed that contemplation is the main ingredient in well-being, "*wisdom must be intuitive reason combined with scientific knowledge*", "*happiness is good activity, not amusement*" and that: *"the things that are naturally pleasant are those that stimulate activity of a given nature"* (Ross, 1963). Both tootling and doodling are then constructive, worthwhile activities that can help to foster feelings of well-being, eudaimonia and ataraxia. They can, too, lead to personal creativity found: *"sometimes flowing spontaneously while in a relaxed, half-awake state when the mind is in 'stillness' and untroubled by external stimuli, allowing the gentle surfacing of inner tensions and delights and the outward expression of innovative, imaginative, evocative, inspired and inventive thoughts"* (Philipp, 1999).

Environments with appropriate aesthetic qualities for tootling and doodling should therefore be encouraged! They provide opportunities to develop and enjoy a health-enhancing resonance within ourselves and with the external factors responsible for that stimulation. This conclusion is supported for example by one study which demonstrated that: "*aesthetic satisfactions (e.g. the contemplation of scenic beauty) and emotional satisfactions (e.g. reaching the top of a peak) were far more important to wilderness hikers than physical (exercise), educational*

(learning) and social satisfactions. It was reported there that: "t*hese findings have been confirmed again and again in a plethora of recreational research both quantitative and qualitative ... Aesthetic quality is almost universally reduced, especially in nonurban scenes, by man-made intrusions* " (Porteous, 1996).

Viewpoints in Eastern societies:
Similar views are held in Eastern societies. For example, Chinese philosophers saw reality, whose ultimate essence they called Tao, as a process of continual flow and change. In the Chinese view, there seem to be two kinds of activity - activity in harmony with nature and activity against the natural flow of things. *"It would seem that yin can be interpreted as corresponding to responsive, consolidating co-operative activity; yang as referring to aggressive, expanding, competitive activity. Yin action is conscious of the environment, yang action is conscious of the self ... both yin and yang, integrative and self-assertive tendencies, are necessary for harmonious social and ecological relationships"* (Capra, 1983).

The Chinese believe that "*the landscape that surrounds us is as much a living, breathing part of the world as we are. Ch'i, or the breath of life, is energy that is active at every level in the universe from the smallest vein in the body to the vast expanse of the solar system. In fact, there is nothing that could stay alive without its presence. Within human beings, it is the energy that flows through the acupuncture meridians of the body. In the earth itself it takes the form of invisible underground currents and the energy flowing through water and, above the surface, that carried by the wind"* (Stamatatos, 1998).

It has also been suggested by a British architect, that "*a disconnection from nature may contribute to some cases of ill health in today's society. For this reason, Chinese gardens, which are places to cultivate the soul, places to be nourished, where mind and body can be connected, provide a provocative model for landscape design in health care settings"* (Friedrich, 1999). It has also been noted that water is used to '*energise'* a garden. The sound and movement of water, it is reported, "*evokes a tranquil, contemplative ambience which adds a vital dimension to gardens, courtyards and patios ... trickling, gurgling, splashing or murmuring, water features are beautiful in any season, a constant play of rippling reflections, of light and shade set against a background of luxurious plants or mysterious stones. Water has the power to soothe and relax jangled nerves, nurturing the human psyche in ways beyond conventional understanding. It is also a key element in attaining good feng shui in a garden because water symbolises prosperity and attracts ch'i, the invisible life energy force whose flowing, unimpeded passage is essential to creating a harmonious, healthy and happy environment. The more natural the water feature and its setting, the more ch'i it attracts, creating an enriching, self-perpetuating upward spiral"* (Stocken, 1998).

Thought and sustainable development:
Sustainable development of aesthetic health qualities and standards need this interconnectedness of thought that has occurred over centuries and between generations. The needs are illustrated by a New Zealand Maori proverb (Dyall, 1988):

"When the old net is worn, take a new net to the sea.
But the new net must ask the old net where all the fish are.
Otherwise the new net may well be an old net by the time they find the fishing grounds".

ENVIRONMENTAL VALUES AND AESTHETIC STANDARDS:

Awareness of environmental opportunity:
Nowadays, in our efforts to identify suitable indicators and appropriate standards of environmental quality for our subjective, personal, intuitive ideals, we as individuals and populations are, unfortunately, not always aware of those environmental values we want to keep, or those we have lost and should seek to recover; the subjective ideals can be difficult to appraise and measure (Philipp, 1992a; Philipp, 1992b). They are however important for the health and well-being of residents, people at work and visitors to a locality (Philipp and Hodgkinson, 1994). For these reasons the arts as well as the sciences have a role in expressing environmental values. This viewpoint is illustrated by the poem, '*A Rural Night Sky*', published by WHO (Philipp, 1992b). It ends with the words:

Priceless are these values of our star-studded skies,
We owe it to all as privilege and pleasure
To sustain them in trust for others who come;
To keep and to share our wonder in this our clear light.

In structuring a balanced relationship of the body and mind and complete adjustment to the external environment, health and well-being depend on the:

- health and behaviour of the local residents, people at work and visitors;
- physical qualities of the natural and built environment;
- gains and losses of environmental opportunity in the built and natural environment for rest, recreation, contemplation, reflection, enjoyment, peace and quiet;
- economic and social well-being of the different populations of residents, people at work and visitors to the area;
- understanding of what visitors seek when they travel, and of what residents in a locality and people at work there wish to sustain in their cultural, social, emotional, spiritual, aesthetic and lifestyle values;
- will and ability of residents and people at work to recognise and retain their rights of respect and to act on that heritage.

Improved understanding of these needs is important for sustainable development. The interdependence of aesthetic quality, environmental values, health and well-being has however, until recently been little studied and remains poorly understood. It is however recognised (Handszuh, 1991), and increasingly important for our quality of life (Philipp, 1996b). Research is needed to understand better aesthetic health threshold limit values, nuisance thresholds, maximum pollutant exposure limits, and the effectiveness of appropriate measures to control aesthetic problems (Philipp et al, 1999a). Any standards that are derived depend on perception and personal values, the views of public pressure and community action groups, findings of research and the outcomes of their use in educational programmes for environmental values, and on the ability to introduce and enforce relevant legislation.

Setting standards and developing guidelines:
Setting environmental standards and providing guidelines presupposes that health effects have been agreed by scientists, the associated costs of control agreed by economists, and that the costs and benefits of pollution control measures have been considered widely by an informed public and decision makers. There is a need to move beyond at least one definition of a '*nuisance*' as: '*something which is undesirable but can be endured if getting rid of it is painful, difficult or expensive*' (Editorial, 1986). Some progress is taking place. The WHO Air Quality Guidelines for Europe, for example, define a nuisance threshold as: '*the level at which less than 5% of the population experiences annoyance for less than 2% of the time"* (WHO, 1987). The guidelines note that value judgements are inevitable and that many psychological and socio-economic factors influence annoyance. This definition provides, however, a baseline for future research with, for example, problems associated with perception of odour, acoustic and light pollution, atmospheric and recreational water visual clarity, visual perspective associated with harmony, colour, clutter and obstruction in the built environment, and the density of litter deposition in public places such as parks, streets, picnic areas and bathing beaches. Attempts to derive guidelines for aesthetic quality of the environment and establish control measures also have additional constraints imposed by scientific, technological, cultural, psychological, ethical, administrative, financial, linguistic and political questions (Philipp, 1996b). If, however, the approach taken to costs is too constrained, the '*real'* costs will not be understood or considered. This, in turn, is inefficient (Saul, 1992).

To help take forwards the research and public needs, there are also definitions emerging for aesthetic standards in rural environments. For example, the Council for the Protection of Rural England defines a '*tranquil zone'* as "*anywhere that lies at least 4 Km from a large power station, 3 Km from a major motorway, major industrial area or large city, 2Km from other motorways, trunk roads or smaller towns, 1Km from busy local roads carrying more than 10,000 vehicles per day or the busiest*

main-line railway, and beyond the interference of civil and military aircraft" (Girling, 1998).

ARTS & SCIENCE APPROACHES TO RESEARCH AND EVIDENCE:

Subjective expression and objective assessment:

It has been noted that: "*we live today in a globally interconnected world, in which biological, psychological, social, and environmental phenomena are all interdependent"* and reasoned that Western society needs "*a new 'paradigm' - a new vision of reality; a fundamental change in our thoughts, perceptions and values*" (Capra, 1983). Moreover, as the dictum of Socrates teaches us: '*An unquestioned life is not worth living*' (Taplin, 1989; Rolheiser, 1995).

At the start of the 20th century, Osler described medicine as '*a science of uncertainty and an art of* probability' (Pencheon, 1999). Traditionally, the sciences have been used to study environmental values and their association with well-being, and as a basis for setting guidelines of environmental quality. From recent research it is though now appreciated more that the way we look outwards at our world influences our perception of it and our values of what is 'truly' important in it (Philipp, 1999; Philipp et al, 1999c). As well as what the sciences contribute, the arts are being used increasingly to help explore, identify and express what we seek and consider worthwhile in our surrounding external environment. In this health research model there is an arts-science gradient. It spans from the artistic, intuitive, inspirational and subjective viewpoints to the measurable, objective, deductive, logical and scientific perspective (Philipp et al, 1999c; Editorial, 2000a). The model recognises that both approaches are informative and expressive, and that each has its evidence base. It also acknowledges that whereas scientists believe that if some activity or other intervention '*does something*' the effect must be measurable, artists are often content to have expressed their creativity and hope that the completed endeavour evokes pleasure when being experienced by others. A dichotomy is not intended. Instead, it is believed that in epidemiological and clinical strategies for public health, the scientific and artistic aspects of inquiry and expression can be combined. The arts-science gradient therefore implies a need to think and act more widely beyond a '*measurement culture*'. It notes that 'if you can't measure it it's not worth doing', and 'only what measured gets done'(Philipp et al, 1999a). "*Not everything that counts can be counted and not everything that can be counted counts"* (Parboosing, 1998).

In developing this research paradigm, it should be noted that positive stimuli from the external environment help us to nurture our personal, internal environments. Thereby, mental health is improved and we are better enabled to sustain our sense of psychological well-being. Creativity and personal endeavour derive from this outlook. "*Creativity involves stimulation and uses of the bodily senses (sight, hearing, smell, touch and*

taste) to absorb and interpret experience, express and impart the understanding gained, and to derive and give a sense of emotional pleasure and personal meaning" (Philipp et al, 1999c). As the artist, Paul Cezanne noted: "*Art is a harmony parallel to nature"* (Denton, 1993).

The arts applied in this way, have shown us that retaining our sensitivity to all that impinges on each of us from the external world and using to the full our five bodily senses, can foster feelings of wonderment and enjoyment about our environment and considerably enhance our emotional sense of well-being (Philipp, 1997a; Philipp, 1998a; Philipp et al, 1999c). This positive reinforcement within ourselves can then, reciprocally, help strengthen our resolve to sustain aesthetic quality for emotional well-being - including that of future generations. The viewpoint is illustrated, I hope, in the following two poems:

<u>With All My Senses</u>

In the eye of a storm
Bare to the waist
and for an hour
I jogged the shore.

Under my feet I heard the pebbles scrunch
Above my head the roar of wind
The cries of gulls
and all around the raging sea.

I watched the fury of an ocean swell
The foam curl
Waves crash
and clouds scud by.

I felt it on my skin
The gusts of wind
The sheets of rain
and the lash of spray.

I tasted with my tongue
Salt on my lips
Smelled the freshness
and breathed the air.

It was delicious and a precious hour
In which I moved my limbs and cleared my mind
and enjoyed with all my senses
what it is to live and come alive.
(Philipp, 1997b):

An unpublished World Metereological Association report in 1987, supports these feelings (Philipp, 1997a). It noted that: "*exercise and recreation both physical and mental are essential for the promotion and maintenance of health and vigour. Without them 'joie de vivre' is liable to give way to a lack of energy ... but how much more pleasurable to enjoy healthy exercise in the open air - exercise which can be an invigorating experience, thereby toning up the spirit as well as the muscles. It can be delightful ... to feel pure air filling one's lungs and caressing one's face whilst the sun warms the body and the exercise agreeably tires the muscles"*.

The second poem, '*At the Beach*', takes the same environmental setting, again as 'a healthy place', but uses a different perspective of movement to illustrate something of the potential benefits that can be derived there for our sense of mental well-being:

Salt tangs the air
Sun beams my face
Wind blows my hair
Waves lap my ears
Sand strokes my skin;

Nature's treasures
Simple pleasures
Yielded to me
Here as I walk
Moved by my thoughts;

By them enriched
I am at peace
Enjoying being
Content here
Here at the beach.

Both of these poems attempt to link 'healthy places' with the ancient Greek feelings of 'eudaimonia' and 'ataraxia', experiences that are equally important and universally sought in today's world.

It has too, been reported that: "*compared with our ready appreciation of natural and contrived rural or garden landscapes, we have much greater ambivalence about townscape, the landscape of cities. On the one hand, cities have long been regarded as humankind's greatest work of art. The orthogonal layout of early cities, their circular mandala outlines, and their central, heaven-reaching, man-made mountains in the form of temples, demonstrate a symbolic value that relates the urban handiwork of humans to the perpetual order of the heavens. On the other hand, modernist urbanism has often exalted the artificiality of the city. The extreme is Le Corbusier's dictum: 'the city is the subjugation of nature by*

man; it is a human action against nature' ... City design and zoning policies have three major goals. In addition to social and economic efficiency and biological health, the city should provide its citizens with a continuously satisfying aesthetic and sensory experience" (Porteous, 1996).

This is illustrated by Denton's observation, (1993), of urban environments: an "*eloquent and simple testimony of human need and hunger for the verdant and flowers is the sight one has on driving from Hong Kong airport along Wanchi to central Hong Kong. Literally thousands of balconies on the concrete ant heap are festooned with countless pot plants and flowers"*.

From such rural and urban perspectives, the concept of reciprocal maintenance has emerged: "*We need to look after the things that look after us"* (Ashton, 1991).

Especially in urban environments, aesthetic qualities need to be considered in respect of their settings. The basic structural elements of city form that need to be considered include:

- districts, sites, spaces and places;
- edges of lines of life and lines of contrast;
- paths, streets, exposures, and circulation facilities between different points;
- nodes, enclosures, open spaces, foci and centres;
- landmarks, focal points, monuments, and individually significant architecture;
- views (floorscapes, groundscapes, vistas, skylines and panoramas)
- the importance of movement, motion experience, dynamic vision, sequencing, rhythm and serial vision, [as cities are usually experienced while in motion];
- artistic coordination of basic physical aesthetic qualities [form, spatial and surface such as scale, proportion, mass, void, line, tone, colour, texture, and visual richness] and basic experiential qualities such as unity, variety, complexity, coherence, dominance, ambiguity, enclosure/exposure, mystery and surprise (Porteous, 1996).

Arts as a basis for science:
Creative expression, as art works, of the pleasure, wonderment and enjoyment derived from an emotional sense of well-being can provide research material to help identify, categorise and prioritise human needs for different aesthetic qualities in the external environment. Thereby, aesthetic aspects of the external environment might become better understood and evaluated to help us then determine, attain and sustain appropriate aesthetic standards of environmental quality (Philipp, 1998a; Philipp et al, 1999c). Article 27-1 of the Universal Declaration of Human Rights alludes to these points: "*Everyone has the right to freely*

participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits".

Wider appreciation and improved understanding of the value of intuitive, subjective, personal, reflective insights into life and living expressed through the arts could yield fresh starting points for new, objective scientific studies to help set environmental standards.

This arts-science spectrum of approaches could be used more to help develop new, well-designed qualitative and quantitative research studies. They would help to improve the quality of the 'evidence base' for health benefits attributed to aesthetic improvements in environmental quality. If the findings by different researchers and with different methodologies reinforce each other, the reliability and validity of different studies would be supported. Such cumulative evidence should then help urban planners, city councillors and architects to assess needs and priorities. In such assessments, where there are many environmental hazards to control but limited resources, priority ranking for the introduction of preventive measures is based on five main questions (Philipp and Hodgkinson, 1994):

1. How serious is the problem in terms of the likelihood of death, disability, disease, discomfort or dissatisfaction?
2. How many people are likely to be affected during a year?
3. To what extent is an intervention technically feasible and likely to relieve or prevent the problem?
4. What does an analysis show for the benefits obtained from the risk, adverse effects of the risk, and the cost implications for different systems of hazard control?
5. To what extent is the community (residents, workers or visitors), likely to accept or adopt the intervention, behaviour or other change required?

Conceptual frameworks have been described as the basis of research programmes and for setting environmental standards, and in which the interdependence of sustainable development, inter-generational equity and environmental quality are addressed (Philipp, 1996b). In this on-going work, qualitative and quantitative research for the association of personal well-being with subjective, intuitive ideals and environmental values are both needed (Philipp, 1997a). Artists too, in considering the hospital environment as one example of a 'healthy place', have recommended that "*research should be commissioned to provide proper scientific evidence of how the quality of life of patients in receipt of health care is improved by contact with the arts, and how such contact affects rates of recovery, uses of medical resources, and other kinds of behaviour"* (Senior and Croall, 1993). Although several research paradigms for the arts and health have been described (Angus, 1999), the medical model has been defended by noting that: "*the medical*

model, although sometimes criticised for its focused approach, implies a need for qualitative and quantitative research data on the benefits of the arts in health to help justify investments by health care purchasers in arts interventions. It addresses therapeutic benefits from reduction of ill-health and health gains from improved well-being and seeks an 'evidence base' for any specific intervention that is being considered" (Philipp, 1998b).

Interdisciplinary and collaborative research is now needed to take the approaches forwards and evaluate the concepts. After all, "*innovation often comes from combining ideas from different* disciplines" (Editorial, 2000b). One new interdiscipline is '*environmental* aesthetics'. It links *"concepts, methods and practice from disciplines as varied as architecture, art history, biology, environmental studies, forestry, geography, landscape design, law, literature, philosophy, psychology and urban planning"* (Porteous, 1996).

Positive response to the WHO challenge:
The next steps in exploring links between '*aesthetics*' and '*health*' can be seen as a positive response to the WHO challenge for researchers to:

- look "into new, unfamiliar areas and work with new colleagues in new ways" (WHO, 1988b);
- consider different environmental impact categories (WHO, 1982);
- support the European Regional strategy of Health for All so that the components fit together as an 'integrated model' (WHO, 1988c).

In moving forwards with a research and development model the words of Professor George Salmond, former Director General of Health, New Zealand, should also be recollected: "*If progress is to be made in improving the nation's health, new concepts, knowledge and skills must be introduced. Analyses are needed which break away from the narrow confines of biomedicine and economic rationalisation, and which encompass more socially and ecologically conscious constructs. The latter would empower people and involve communities in democratic approaches aimed at enhancing well-being and health status"* (Mooney, 1995).

At the final plenary session of the first World Symposium on Culture, Health and the Arts, 13-16 April 1999, in Manchester, England, to take these concepts forward, the following Recommendation was adopted:

"*Health care purchasers and technical programme directors of the World Health Organisation and the World Tourism Organisation are seeking further research evidence of high quality for the effectiveness of arts interventions in health care and health promotion. They also seek improved understanding of the effects of the aesthetic quality of the built and natural environments on human health and well-being. Present*

interdisciplinary collaboration to strengthen this evidence base includes initiatives in the UK of Arts for Health, The Nuffield Trust, King's Fund, Health Education Authority and the British Council, of Art Access Aotearoa, New Zealand, and specialist centres in for example, the USA, Scandinavia and Japan. This networking could be usefully extended and co-ordinated with the objectives of multi-centre studies and widespread dissemination of the findings of qualitative and quantitative research evidence that have been published in the peer-reviewed literature" (Philipp and Eames, 1999).

Reports of this World Symposium have been published in the medical literature (Martin, 1999; Friedrich, 1999; Parker, 1999).

A sensible relationship between idea and action is therefore possible. As Voltaire taught us, humanism should balance reason (Saul, 1992). The efforts to better understand what determines our humanist, moral or aesthetic values and ensure that the environmental qualities we seek can be sustained is however, unlikely to be easy. As the English poet, T.S. Eliot noted (Editorial, 1998):

"Between the idea
And the reality
Between the notion
And the act
Falls the shadow".

CURRENT RESEARCH QUESTIONS AND THE NEW AESOHP PROGRAMME:

AESOHP (A European Sense of Healthy Place and Purpose):
It has been reported that: *"A work of art can undeniably impart a 'sense of place', of identity and landmark to an undifferentiated urban space, provided that it is well sited ... the need to re-establish meaningful public space is pre-eminent ... Because of the harmful emotional effects of destroying enormous tracts of the inner cities, there is a need for Psychological Conservation Areas in which familiar landscapes can remain. This is even more important in new towns and cities where there is a strong psychological need for markers for orientation and pedestrian meeting points within a predominantly vehicle-determined system"* (Petherbridge, 1987). For example, at least in Australia, '*positive town character image*' has been positively associated with natural landscape features that are beautiful, pleasant, distinctive and interesting, by certain built features with similar qualities, and by popular social settings associated with connotations of familiarity, friendliness, openness, liveliness and safety (Green, 1999). Yet, people still often ask:

- Why do the arts matter?
- Why should I explore my own creativity?

- Do the arts affect me directly?
- Is the aesthetic quality of our environment important?

A new collaborative research and development programme, AESOHP, (A European Sense Of Healthy Places and Purpose), is being established to help explore such questions. It has links with the WHO Healthy Cities project, and in the UK with the Nuffield Trust-supported Institute of Medical Humanities, the UK Partnership for Global Health, and the Centre for the Arts and Humanities in Health and Medicine (CAHHM), in the University of Durham . These developments endorse the aims of a new journal, Medical Humanities, from the British Medical Journal Publishing Group to help promote, through a high standard of academic and public discussion, reflection of the arts and humanities in health care and explore the re-orientation and humanising of the knowledge and goals of medicine, both in theory and practice.

The objectives:
The objectives of the AESOHP programme are to help people to better:

- enjoy for their health and well-being, nature and nature as art;
- appreciate the health benefits of integrating natural environments into urban planning;
- encourage architecture that is sensitive to its environmental setting;
- foster the consideration and development of aesthetics in issues of the built environment;
- seek, establish and adhere to aesthetic standards of environmental quality;
- utilise arts works from the visual and performing arts to enhance environmental quality.

For this work it is appreciated that art is used to express feeling, interpret experience and transform appearance. AESOHP considers that the purposes of art in the environment are to:

- enrich the lives of people;
- help alleviate stress and boredom;
- provide reassurance, comfort and humour;
- give purpose and dignity to an area;
- encourage public use of an area;
- improve way finding systems and establish landmarks.

In exploring these objectives, the AESOHP programme has identified different uses for the arts in health (Philipp et al, 1999c). They include arts as:

- research tools;
- practical activities for creative endeavour and expression to help enhance health and improve well-being;

- enhancing the aesthetic quality of an environment;
- methods to stimulate positive receptivity of the five bodily senses to aesthetic quality of different natural and built environments and any art works in them, and in ways that benefit health and emotional well-being;
- a means to help people interpret events in their lives, attain insight into any difficulties being experienced, and to derive from this a feeling of individual meaning, personal support and emotional pleasure, and in ways that the resultant sensations can be expressed, shared and imparted to others for their consequent enjoyment too.

Preliminary research questions:
Several preliminary research questions have been identified (Philipp et al, 1999c). They are being addressed and include:

- Is the art of the natural environment important and how does its 'importance' differ from that of the built environment?
- Can and should art be included in the health care environment?
- Can art (natural/art work) be used to help people identify with a place, become receptive to what is there, and resonate with it to help give a sense of belonging, identity and purpose so as to enjoy being at one with it or part of it?
- What would we do if art was not readily available, and what environments should it be included in?"
- What do we understand by the word '*aesthetics'* ?
- How are sensory inputs from different environmental stimuli associated with mental health and well-being?
- How can the aesthetic quality of an environment help to improve the '*quality of life*'? WHO has defined this as: "*an individual's perception of their position in life in the context of the culture and the value systems in which they live and in relation to their goals, expectations, standards and concerns"* (WHOQOL Group, 1993).

To help structure the research questions and on-going design of studies, a 10-point conceptual health gains framework has been developed. Healthy places and a healthy sense of purpose are encompassed in it. The model is reproduced below.

A 10-POINT COMMUNITY HEALTH GAINS MODEL TO HELP EVALUATE 'HEALTHY PLACES' AND 'A HEALTHY SENSE OF PURPOSE':

This community health gains model addresses:

- the interdependence of lifestyle, self-esteem (a sense of value and worth), well-being (a feeling of contentment, happiness and health)
- environmental gains,
- utilisation of qualitative and quantitative research methods,

- the need to audit different activities.

It was developed to help formulate research proposals, identify topics to be studied, decide on specific questions to be asked and to prepare research protocols for the evaluation of projects and programmes for the arts and health (Philipp, 1997a; Philipp, 1999; Philipp et al, 1999a).

The 10 points are, in sequence:

1. A community of people at work, in a neighbourhood, holiday resort, sports arena, public park, botanical garden, bathing beach, prison, conference, plane, train, bus or in any other setting, is more than a collection of individuals in that it should have 'synergism' and not just 'summation'.
2. Becoming actively involved in a community gives a sense of belonging and helps to increase personal well-being.
3. 'Self-esteem' (a sense of personal value and worth) and 'well-being' (a feeling of contentment, happiness and health) are interdependent.
4. Heightened self-esteem is likely to lead to a healthier lifestyle.
5. Creative expression through group activities provides health-promoting opportunities that help individuals to improve their well-being and self-esteem.
6. Art therapy has evolved as one of the creative therapies used in psychotherapy ('*the systematic use of a relationship between a therapist and patient - as opposed to physical or social methods - to produce changes in cognition, feelings and behaviour*') (Holmes, 1994). There is evidence 'that the average patient having psychotherapy does better than 85% of control subjects' (ibid).
7. Improved well-being and self-esteem lead to:

- reduced dependence and prescriptions for psychotropic medications;
- less repeat attendances at Primary Health Care Centres and Hospital Accident and Emergency Departments;
- lifestyles changes (reduced smoking, less use of alcohol and addictive drugs, improved diet and more physical exercise);
- less delinquency;
- less crime;
- less sickness absence from school or work;
- more constructive leisure-time pursuits;
- greater attendance at adult extension further learning and arts appreciation courses, outdoor nature studies, recreation and sports activities.

8. The concept of '*arts for health'* and involving artists in health care and health improvement has many dimensions. It can be viewed as a public health intervention of different programmes and projects targeted to mental health promotion and with the objective of helping to improve levels of well-being and self-esteem in the community.
9. Counselling in primary health care for mental health problems, at least in the UK, ranks seventh in a list of 27 research priorities identified by

the National Health Service Research and Development programme as needing health technology assessment (Smith, 1994).

10. It has been reasoned that if something can be counted or measured, it gains a questionable scientific credibility often not afforded to the unmeasured or unmeasurable and that because of this, a finding or result is more likely to be accepted as a fact if it has been quantified than if it has not (Black, 1994). Yet, it has also been noted that 'it has to be acknowledged that some situations are inevitably beyond the scope of quantitative methods but could be better investigated by qualitative ones' (ibid). It therefore seems that an 'evaluation battery' of quantitative and qualitative research methods are needed to determine if the application of the arts in ... health care benefits patients (and if so, in what way and by how much), and if the perceived benefits from its delivery are cost-effective.

This 10-point community health gains model is being applied to research and development programmes and projects that will, it is hoped, help to strengthen the quality of the evidence base for associations of the aesthetic quality of the built and natural environment with health. Such objective evidence needs to linked to subjective experience. As one example: "*an active urban-gardening programme was found to promote sociability, reduce vandalism, and generate neighbourhood revitalisation, including cleaner streets and building paint-up. For the individual, self-esteem was considerably enhanced and there was general improvement in 'a sense of tranquillity and well-being'. Physicians in a senior citizens' centre reported more objective measures: 'It helped lower ... blood pressure; some patients are taking less medication, are more relaxed, and feel they are needed' "* (Porteous, 1996).

PRACTICAL EXAMPLES OF APPLYING THE COMMUNITY HEALTH GAINS MODEL TO AESTHETIC PROBLEMS:

Eight examples:

The conceptual 'community health gains model' has been adopted to explore associations of the arts and environmental health. The following eight examples illustrate some areas in which the investment in social capital has yielded identified health benefits. Such arts programmes do, however, need improved cost-effectiveness and cost efficiency studies (Nicoll, 2000). As with inquiry into any complementary therapy (Ernst, 1996), more information is needed to better evaluate the sometimes contrasting viewpoints of the critical scientist and the enthusiastic practitioner.

1. **Recreational water and bathing beach quality:** Problems associated with the aesthetic quality of recreational waters and bathing beach quality have been emphasised in several WHO and United Nations Environment programme reports. They reflect increasing concern about the currently unstable relation between population,

health and a sustainable environment, the aesthetic, physical injury and microbial problems of uncollected refuse and discarded litter, mixing of domestic, general and clinical waste, safe sewage disposal and fears that environmental degradation of bathing beaches could lead to loss of tourism (Philipp et al, 1997). People, it seems, make their decision to use recreational waters principally on the appearance of the water (Shah et al, 2000). In Rimini, Italy, in 1989, tourist bed occupancy during mid-summer dropped to 50% of total capacity associated with red algal blooms of the sea water. In 1990, following a recommendation of the Second International Conference on Tourist Health that environmental quality objectives could be better considered in environmental debates for standards setting, it was recommended that aesthetic standards and indicators for the quality of bathing water and beaches could be usefully developed and agreed by Member States (WHO, 1990). This recommendation was then linked to the Coastwatch UK studies which have been undertaken annually since 1991 for time trends of the annual rate of different litter, sanitary and medical waste items. Some 6000 volunteer fieldworkers are involved each year in this work and 15% of the UK coastline is covered. The time trends between 1991 and 1994 for the number of medical items per Km of coastline surveyed showed a four-fold deterioration in the environmental quality of bathing beaches (Philipp et al, 1994a; Philipp et al, 1997). A concurrent health economics audit of needlestick injury data from bathing beaches identified considerable direct health service costs (Philipp, 1993a). From all the findings it was concluded that provision of litter bins, regular refuse collections and beach cleansing was insufficient and that a greater sense of personal responsibility and individual accountability is needed. Public education programmes have since been adopted widely and legislation for 6mm fine wire mesh grids at all storm water and shore line sewage discharge points has been introduced to help improve the quality and range of environmental controls (Philipp et al, 1997). WHO has accepted the importance of such aesthetic factors; (Williams et al, 2000; WHO, 1998).

2. **Art activities and mortality:** A cohort study, undertaken in Sweden, on a random sample of 12,500 people followed up after being interviewed in 1982-83 until December 1991, identified that attendance at, or participation in, arts and other cultural events was associated with reduced mortality experience. Factors that were controlled included age, sex, education level, income, chronic disease experience, social networks, smoking and physical exercise (Bygren et al, 1996).
3. **Participation in arts activities:** In New Zealand, a 'Creative New Zealand' survey of 5,846 people aged over 18 years found that "*26% used the arts to overcome stress, anxiety or depression*" and "*90% of adults took part in an average of four different types of arts activities each month ... Of 69 different arts activities highlighted by people, the most popular were reading non-fiction books for leisure, reading fiction, listening to pop/rock music, classical/chamber music, knitting, listening to country/folk music, storytelling, deign arts, singing and band music*"

(Cleave, 1999). The findings are being used by the New Zealand Ministry of Cultural Affairs.

4. **Poetry and psychological well-being:** Poetry, it has been reasoned, "*is the guardian of our integrity, our spirituality and our language"* (Mosely, 1994). Doctors have used poems in medical education to discuss feelings and communication problems, read them at night to help calm agitated elderly patients, and quoted from them to help patients develop coping strategies at times of personal crisis and to illustrate points in their lectures (Philipp, 1995). The poetic imagery derived from asking patients to write poems about their experience of trauma, illness and hospitalisation is highly evocative (Philipp, 1996c). The Hippocratic Oath has even been translated into poetry (Philipp and Hart, 1998). Poetry has also been used in health studies and with WHO, to explore ways of affirming personal identity, expressing personal values and of identifying with a place (Philipp, 1992b; Philipp, 1996a; Philipp, 1997b). Poetic expression has also been used as metaphor to find and express association. For example, Napoleon, in considering the Piazza San Marco in Venice as a public place, described it as: "*the most beautiful drawing room in Europe, for which it is only fitting that the heavens should serve as ceiling"* (Jepson, 1997). It seems that the mind likes to work with poetry on the emotional content of recollected imagery. From such concepts, it was found in a qualitative study arising from the question: 'Could or does poetry reading or writing poetry benefit health?' (Philipp et al, 1994b), 75% of 196 participants reported spontaneously that writing poetry helped to relieve their personal stress and anxiety. They also reported that reading it can evoke calming within oneself and resonance with the external environment. Attributing their health gains to *finding* poetry, 13 respondents were able to discontinue their benzodiazepine tranquillisers or antidepressive medication (Philipp and Robertson, 1996). One respondent commented that: '*Poetry is infinitely preferable to a pill, has no adverse health effects and revitalises and enhances the human psyche.'* Health professionals also reported they had successfully used poetry in the management of anxiety, depression, dying and bereavement, post-traumatic stress, eating disorders, marital problems and sexual abuse. The reliability of these findings has since been supported by findings from two separate studies amongst members of the UK National Association of Writers in Education that showed repeatability and coherence with published studies (Philipp, Combes and Hughes, unpublished data). News media interest in this work has been considerable (Philipp et al, 1999c). In further support of this area of research, the Royal College of Psychiatrists has identified that '*talking therapies'* are evaluated more positively when compared with electroconvulsive therapy, major tranquillisers and antidepressants (Britten, 1998). At the least, strengthening visual imagery, for example by reading for relaxation on holiday, seems to be popular. For example, a point prevalence study was undertaken in 1995 of 300 adults sitting on Platanias beach, Crete, in the afternoon summer

sunshine between two flags of the Foundation for Environmental Education in Europe Blue Flag health, hygiene and safety award scheme. The study identified that 35% of people were reading books, newspapers or magazines, 20% appeared to be asleep, 7% were drinking alcohol and a further 6% were smoking cigarettes. The remainder were talking in couples or small groups. Nobody was undertaking more than one activity at the same time. Those approached commented they were reading to retreat, relax, escape, restore '*balance within'*, and to help buffer themselves against the year ahead (Philipp et al, 1999a). One plausible interpretation of the findings is that in suitable environmental settings, health benefits are derived from imaginative day dreaming associated with reading. Perhaps too, for their relaxation, holiday makers prefer reading to alcohol, cigarettes or shared discussion!

5. **Children's paintings:** The viewpoint of children about their surroundings, expressed through art, is informative (Philipp, 1983; Philipp, 1987; Philipp and Philipp, 2000), particularly as up to the age of 10 years their viewpoints tend to be spontaneous, enthusiastic, imaginative and creative (Philipp et al, 1986). Awareness and understanding of their views are important as in the context of a moral framework for environmental health and in our efforts for sustainable development, adult generations are entrusted with stewardship of the world for younger and future generations. Many of us need to be reminded that we do not own the world to do with it as we like. Instead, we hold it in trust for others who will come after us. Starting points for studies with children include a contents analysis of their poems (Philipp, 1993b; Philipp, 1994) on the theme for example, of '*What I think is important in the world around us'* (Philipp, 1996c), or: '*What I like/enjoy/value/look forward to most in my summer/winter holiday"*, or visual arts competitions of paintings, drawings or sculpture on an environmental theme. Some findings have been reported (Philipp, 1983; Philipp et al, 1984; Philipp et al, 1986; Philipp, 1987). Others studies are being designed to compare different age, sex, socio-economic and/or geographical populations (Philipp, 1996d; Philipp, 1997b). Such studies build on findings of other relevant work. It includes, for example, the anxiety-reducing effects of exposing patients to images of nature before cardiac catheterisation (Martin, 1999), the influence of a view from the hospital window on post operative recovery times following cholecystectomy (Ulrich, 1984), and uses of children's art from schools participating in the WHO initiated European Network of Health Promoting Schools. This last example communicated ideas and feelings about the environment and health themes of the Third Ministerial Conference on Environment and Health, 16-18 June 1999, organised by the WHO Regional Office for Europe and in which 54 countries were represented (Price, 1999).
6. **Art in public places:** Professor Roberto Daolio, Lecturer in Cultural Anthropology, Fine Arts Academy of Bologna, Italy, reported in the 'Coast in Bloom 2000' brochure of the Tourism Office, Emilia Romagna

Region, that: *"Art has long been present in public places, encouraging people to take another look at their surroundings. Contact with the flowers and plants in the cities along the coast of the Emilia-Romagna has provided the young artists of the Academy with a challenge and with an opportunity to work with gardening and parkland experts to make their mark on the public's perception of ecology and conception of gardens. Everything these artists have done is closely related to the idea of 'mind ecology' and the ability to show nature tamed yet not purely decorative in function"*. Art is also being used increasingly in public buildings such as hospitals, libraries and office buildings to open up spaces, provide landmarks for way finding and give opportunities for expression, comment, humour, quiet enjoyment, contemplation and reflection. "*We take it for granted, in the enduring buildings of our architectural heritage, that art and architecture go hand in hand. Sculptures, tapestries, ironwork, stone and woodcarving, whether on a grand scale or in a simple setting, gladden the eye and raise the spirits. Enrichment of this kind was stripped away in the stern functionalism of recent times and we are beginning to realise just how much we have lost and how unsatisfying and lack lustre buildings can become ... Central to the new collaboration are the issues of materials, social relevance, humanism of scale and the rediscovery of ornament ... Brussels, Amsterdam, Toronto, Munich and Prague are some of the cities which have programmes for enlivening their Metro systems with commissioned art works ... The Art in the Metro projects ... have all become tourist attractions and draw in users to the system"* - indeed, the Metro system in Stockholm has been described as "*the longest art gallery in the world"* (Petherbridge, 1987).

7. **Poems in public places:** Poems are an outwardly visible construct of inwardly held thoughts, feelings and emotions. People when reading or listening to a poem may identify with the mood, theme, subject matter, rhythm or rhyme. Personal reflection and the free association of imagery when doing so can result in a sense of well-being (Philipp and Robertson, 1996). Some poems can evoke through their imagery, a feeling of being transported, at least in one's mind, from a present environment to a '*better place*'. It has been reasoned though that to become public art, poetry: "*needs to engage with the visual and develop a conceptual, spatial dynamic to echo its musicality"* (Editorial, 2000c). This inwardly aesthetic power of poetry has been utilised in '*Poems on the Underground*', described as: "*one of Britain's best loved and most familiar public art projects, quietly soothing the temperament of millions of Londoners as they do daily battle with the challenging London transport system"* (Colthorpe, 2000). The qualities of suitable poems for such use in public places are considered as: thoughtful; warm; resonating; uplifting; short; readily understood; and thematic (Benson et al, 1998). As a consequence of using artists in its refurbishment programme, "*the London Underground is well on the way to becoming not only a nicer place to travel in, but also an attraction in its own right"* (Petherbridge, 1987). The British programme has since

been extended abroad. For example, a similar one was established in 1987 in Moscow. It has for example been reported that 15,000 posters featuring 30 poets will adorn carriages for underground rail users of the Moskovsky Metropoliten, used by five million people each day and to help them *"momentarily escape grim reality"* (Sawyer, 1997).

8. **Testing the 'nature tranquillity hypothesis':** This hypothesis holds that the contemplation of nature is psychologically beneficial. It has been tested in the USA by Roger Ulrich, an environmental psychologist. He used subjects in a high state of anxiety arousal (students shortly after an examination). *"Subject first answered the Zuckerman Inventory of Personal Reactions (ZIPERS) and were then asked to rate colour slides of scenery on an aesthetic preference scale. Finally, a second round of ZIPERS was undergone. Subjects were divided into two groups, one of which saw 'ordinary natural scenes' (e.g. rural settings), the other urban scenes with no nature content. Before the screenings, both groups tested high in anxiety, and were especially high in anger and fear arousal, and correspondingly low in positive affect. After the slides, the viewers of natural scenes showed an increase in positive affect and decreases in fear arousal, sadness and anger. In sharp contrast, the viewers of urban scenes tested even lower than before on positive affect, and while fear arousal decreased slightly, both sadness and anger increased. This was an extremely conservative test, for the nature scenes chosen were often scruffy rural views, while the urban slides depicted not extremely ugly scenes but relatively unblighted environments ... Delving yet further, Ulrich sought to discover whether this expressed preference for therapeutic nature over anxiety-laden urban environments might have some physiological basis. In the next experiment subjects were exposed to an ... array of slides in three categories: nature dominated by water; nature dominated by vegetation; and urban scenes with neither water nor vegetation. The subjects were monitored in three ways; brainwave alpha-amplitude levels, using an electroencephalograph (EEG); heart-rate levels, using an electrocardiograph (EKG); and emotional state, using ZIPERS and semantic scale tests. No heart-rate variations amongst groups appeared on the EKG. The EEG, however, recorded significantly higher anxiety (lower alpha-wave amplitude) on the part of subjects viewing urban scenes. Vegetation reduced anxiety somewhat, but water significantly lowered anxiety levels. As expected, the tests of emotional states found urban scenes to heighten, and nonurban to lower, feelings of sadness and fear arousal. Again, vegetation lowered fear arousal somewhat, but water scenes were associated with a marked reduction in fearfulness".* It was concluded that: *"Clearly, there are physiological as well as purely cognitive reactions to the scenic qualities of environment"* (Porteous, 1996).

CONCLUSIONS:

The way we look outwards at the world influences our perception of it, our values of what we believe is truly important in it, and what we do with our lives in this world we inhabit. We each have a responsibility to help encourage human understanding and ensure that environmental values and opportunities are sustained. The world is, after all, a beautiful place and life is precious. Living in it can, and should, be a wonderful, fascinating and pleasurable experience. At least one author has reported that: *"We can consciously alter our behaviour by changing our values and attitudes to regain the spirituality and ecological awareness we have lost"* (Capra, 1983).

Gains and losses of environmental opportunity are associated with the capacity of the physical environment to give enjoyment and pleasure by virtue of the combination of its physical qualities. The perceived hedonic gains and losses are associated with the human capacity to derive personal enjoyment and pleasure. Aesthetic appreciation of the quality of different environments is therefore at the basis of our environmental values. Nevertheless, its contribution to health is not fully understood. The research evidence to justify establishing aesthetic standards for human health and well-being is often not available. Aesthetic appreciation is however an important human attribute and opportunities for its experience are widely sought in urban and rural environments. Environmental diversity is also needed for personal and cultural enrichment. The opportunities for its enjoyment give personal pleasure, encourage social interaction in public places, and stimulate personal creative endeavour. They in turn benefit health. Accordingly, improved understanding of aesthetic qualities are desirable. But, can they be readily recognised, can the skills of perceiving and appreciating them be nurtured or taught, what factors are needed to encourage them, should they be fostered, who will gain from developing them, and in what ways might the gains be beneficial to health?

More attention is needed to the:

- **theory** as to why aesthetic appreciation and involvement with the positive qualities of the natural and built environment can help people make sense of life and give it subjective meaning, purpose and feelings of personal fulfilment;
- **scrutiny** of personal experiences and critical appraisal of progress with programmes and projects reported by the public and different groups of health professionals;
- **examination** of the evidence from published research for the benefits to health from participation by individuals;
- **original research** to strengthen the evidence base of existing knowledge.

These questions are being considered in the AESOHP programme. Involvement with it is welcomed. **The underlying hypothesis** in this

work is that: '*our mental health and well-being are influenced by the aesthetic quality of our external environment and that improved understanding of this association can influence our sensitivity to environmental values and help each of us to identify what we seek, can attain and wish to retain and enjoy from these aesthetic qualities*'.

To endorse this underlying hypothesis of the AESOHP programme, it has been reported that "*true knowledge cannot be divorced from wonder, and wonder cannot be divorced from life"* (Skolnik, 1988). Improved awareness and understanding of the aesthetic aspects of health could therefore help people to derive more enjoyment from life. Without enjoyment, as T.S. Eliot noted in his poem, 'Chorus from the Rock':

Where is the life we have lost in living?
Where is the wisdom we have lost in knowledge?
Where is the knowledge we have lost in information?

In the words of Thomas Traherne (1636-74) , (Wells-Thorpe, 2000), we should not be left to lament:

"Is not sight a jewel? is not hearing a treasure? Is not speech a glory? O my Lord pardon my ingratitude, and pity my dullness who am not sensible of these gifts. The freedom of thy bounty hath deceived me. These things were too near to be considered".

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