

# Why Consider Future Generations? - And How to Consider Them More Fully

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## **Abstract**

This paper explores the question of our responsibility to future generations in the light of our capacity to radically damage their quality of life, if not prevent their very existence. It introduces the concept of *active future timescape* as part of a strategy to expand our capacity to think about, empathise with, and take active consideration toward future generations. The notion that we have moved from an essentially *traditional* to a *transformational civilisation* reinforces the urgency of employing foresight. The development of quality of life indicators (QLI) is explored, and ‘*extra-QLI vectors*’ of *equity*, *integrity* and *security* are proposed.

## **Introduction**

In order to stimulate discussion about the future and the condition the existing generation will leave the planet for future generations, it is necessary to present convincing arguments as to *why* we should be concerned about the future.

Why be concerned about posterity? Afterall, as Arthur C Clarke once (jokingly) remarked to the author, ‘what has posterity ever done for us?’ Aside from the occasional individual of vision and foresight, when have past generations ever been greatly concerned with future generations? And did it really matter that they were *not* particularly concerned?

An argument against consideration of the longterm future (hereafter defined as 30-1,000 years) is that predicting a mere decade or two into the future has proved to be so inaccurate in the main that it seems fanciful at best, a waste of time and even dangerous at worst. One could argue that it is therefore important to take care of today and let the future take care of

itself. There is an interesting parallel between arguments about planning (intervention) in the marketplace, and planning for the future.

Serious futurists, of course, now rarely attempt to predict the future, but aid in elaborating a range of future scenarios so that a greater variety of options are available for decision-makers today, as well as promote greater awareness of possible dangers and potential benefits lying ahead.

The possible dangers are great. We can no longer afford *not* to consider the long-term future. We therefore need to develop ways to think about future generations so that they become more than a two-word, abstract, and faceless concept. We also need to explore the notion of ‘quality of life’ more fully. These two endeavours will help reduce the risk of disaster in the future, but can also provide great benefits to the current generation.

## **1. Broadening our timescape beyond our own generation**

The original intention for this section of the paper was to demonstrate that there has long been a tradition of concern for the welfare of future generations. However, after a review of historical sources, it must be said that if there *was* a tradition in Europe over the last millennium, it was not strong, at least amongst the literate (eg theocratic) and influential, mostly male, population, whose opinions and views dominate the literature. Around 1970-74 there was a ‘blip’ in the literature - a sudden interest in the issue of future generations, perhaps triggered by the sensational impact of works such as ‘The Population Bomb’ (Ehrlich et al 1968) and ‘Limits to Growth’ (Meadows et al 1972). But the interest has since proceeded at a more modest pace.

The concept of ‘posterity’ (and implicit obligations to it) appears widespread in popular culture in the latter half of the second millennium [1], but what survives is less an affirmation of the concept than a challenge to it (as Clarke echoed above):

We are always doing something for Posterity, but I would fain see Posterity do something for us.

Joseph Addison (1672-1719)

The term 'posterity' could mean the future generally, or could refer directly to one's descendants, ie future generations. The idea of working for the benefit of posterity, was countered by the fatalistic concept of Divine Providence:

Men must pursue things which are just in the present, and leave the future to divine Providence.

Francis Bacon (1561-1626)

Although this author has abandoned the search for any sort of continuous and explicit tradition of concern for future generations, it is worthwhile contemplating the evolution of the dimension of time in human consciousness - which will be referred to as the 'timescape'. The term 'timescape' is employed here since obvious alternatives such as 'timespan' and 'timeframe' do not connote an expanse, a sense of vision, a capacity to see the nature of historical progression and a capacity to project into the future [2]. The dimensional attributes of span, frame and scape could be described as one, two and three-dimensional respectively. The complexity and richness of cosmology, the evolution of life, and of human civilisation requires a metaphor that connotes as many dimensions as one can manage!

## **2. Passive timescape**

'Passive timescape', historical or future, refers to the extent of time that has been considered in a formal way, but not necessarily acted on. For example, our current passive historical timescape, one could argue, is about 10 billion years, or the estimated age of the universe.

The Ancient Hindus calculated the age of the universe to be about half the lifetime of Brahma. Since Brahma lives for 100 Brahman years, each Brahman day lasting one 'kalpa', each kalpa lasting one 'mahayuga', and each mahayuga lasting 12,000 human

years, the current age of the universe was estimated at 426 billion years [3]. The Ancient Hindus also predicted that the universe would run down in another 50 Brahman years (ie 426b years) after which it would lie dormant for 852 billion years before another Brahman cycle would begin.

The passive timescape of the Ancient Hindus, both historical and future, could therefore be described as 852 billion years (or cyclic multiples of this amount) [4].

### **3. Active timescape**

The 'active timescape' is defined here as the extent of projected time that will influence actions. The active *historical* timescape (acting on the past, perhaps to address an injustice committed in the past) may be different to the active *future* timescape (eg acting to influence events in the future). Irish Republicans and dissident African Americans (both North and South) may have an active historical timescape of 300 years or more, from the time they were subordinated by another culture. One could argue that Muslims, Christians and Buddhists have active historical timescapes of 1,300, 2,000 and 2,500 years respectively. But rarely, if ever, do people live by an active *future* timescape of more than a generation or two.

One can speculate that the ability to project into the future and act on those projections may have developed as a survival advantage - for example, by planning for seasonal fluctuations thereby surviving harsh winters or summer droughts.

Evidence of an active future timescape spanning decades goes back at least 4.5 millennia. Around 2650 BC, the Egyptian pharaoh Khufu (or Cheops) commissioned construction of his own tomb, the Great Pyramid, which is estimated to have taken 100,000 men 20 years to build, and must have entailed considerable foresight and patience since life expectancy at that time would have been little more than 40 years.

The active future timescape shifted beyond the boundaries of a single generation (and hence, arguably, into the realms of altruism) during the early Christian era in Europe. Cathedrals were commissioned and designed even though the kings, cardinals and architects knew they would never live to see their projects completed. Notre Dame Cathedral, commissioned by Bishop Maurice de Sully in 1163, took 129 years to build. More recently, Gaudi's monumental Sagrada Familia Church in Barcelona was begun in the 1880s and is expected to be completed early in the 21st century, long after Gaudi's death in 1926.

Mackenzie (1984) has argued that Chinese civilisation, possibly as early as the 6th century AD, long ago had a tradition of concern for future generations (active timescape) as evidenced by their use of iron weights and bars to build lasting dams, and their practice of cleaning canals whose rate of siltation would have been almost imperceptibly slow. The legend of the 90-year-old peasant undertaking to cut a passage between the mountains of Thai-Hsing and Wang-Wu supports this assertion. The old peasant replies to his detractors:

Though I must die, I leave a son behind me and through him a grandson. That grandson will beget sons in his turn and those sons will have sons and grandsons. With all this posterity my line will not die out, while on the other hand the mountain will receive no increment or addition. (Needham 1964)

#### **4. Limited timescape**

While modern science is catching up with ancient science in regard to the magnitude of (passive) timescape, on the political and industrial level, we seem to be stuck in an active timescape of a mere 14 years or so - seven years into future elections and investment cycles, and seven years back to past successes and failures of policy and investment decisions. How many governments and corporations have a Department for Longterm Strategic Thinking?

The public policy timescape of Academia might extend a little further, perhaps 25 years into the future, and extend its roots back 25-50 years, sometimes further. But with its foundations built on positivism, with a heavy bias toward analytical thinking and empirical knowledge ('certain knowledge'), and with its disciplines separated into distinct faculties, Academia seems largely unable to address the longterm future.

Economists too have attempted to insulate their 'science' to preserve its purity, claiming that the theories are impartial to value judgements and value assumptions and hence completely objective. But, as if roots and vines were penetrating from the surrounding forest, the walls of economics are crumbling to reveal the broader frames of reference such as 'natural capital' on which 'human capital' depends, and 'quality of life', of which 'standard of living' is but a component, and numerous other qualities such as the global commons (air, ocean, rivers, water tables, etc), rights of communities to self-determination, the rights of future generations, and the intrinsic value of nature irrespective of any utilitarian value it may have, all of which defy measures to monetarily quantify them.

'Neo-neo-classical' economists attempt to cope with the demands of a broader definition of accountability by boot-strapping awkward devices onto their once elegant models, such as new valuation techniques to assess 'non-use values' such as 'existence value', 'option value', and 'bequest value' (Hamilton 1997). These new valuation techniques attempt to overcome absurd logical conclusions of applying discount rates - for example, that rational consumers would want to consume most of their wealth (including natural capital and non-renewable resources) in the short term, at least within 30 years, and definitely not leave anything to future generations.

As one dismayed futurist puts it:

What other policy analysts hated was the extended space/time horizons of futures research. Its scope - global and covering decades and centuries - often blindsided the more myopic focuses of political scientists, sociologists and economists, who often failed to get even their *hindsight* right. (Henderson 1996)

## **5. Why it is more important than ever to consider future generations**

We have reached a watershed in human history defined principally by our technological capacity, to exterminate ourselves. If we fail to exterminate ourselves, we are well equipped to radically degrade the biosphere and the quality of life of future generations.

We have had the capacity to exterminate other species for sometime. It is thought, for example, that the Maoris are responsible for hunting the Moa (large flightless bird) to extinction. The extermination of the Passenger Pigeon around 1910 is another most unremarkable achievement. Thought to have existed in greater numbers than any other vertebrate land animal on record (renowned ornithologist John J Audubon estimated 1,115,136,000 in one flock alone), it was also hunted to extinction (Deignan 1994).

Massive deployment of nuclear weapons in the 1960s marked the first immediate risk of self-annihilation. Since then the potential release of biological weapons, intentionally or inadvertently, constitutes a second major threat to our survival.

The destruction of habitat and disruption of ecosystems through exploitation, toxicity and global warming, is currently leading to extinction of other species *en masse*. While the UN estimates approximately 30,000 species are in danger of extinction [5], another source estimates we are losing approximately 18,000 species a year, or 50 species per day - and that of a total of 13-14 million species, 10 million could be extinct by the year 2020 given current trends [6]. Even if these estimates were exaggerated by a factor of ten, the result is still tragic.

Protagonists of nuclear energy have seized on the global warming crisis to push for expansion of the nuclear industry, which currently supplies 15% of the world's electricity. However, as Meadows et al (1992) point out:

No nation has solved the problem of nuclear wastes. They are hazardous to all forms of life, both by outright toxicity and mutagenicity. Nature has no way of rendering them harmless. They disintegrate by their own inner timetable, which for some can be decades, centuries, or even millennia.

Everyday we produce over one million tonnes of hazardous waste (Meadows et al p91), much of which, like nuclear waste, is stockpiled for future generations to deal with.

It is incredible that the current generation pays very little attention to the needs and interests of future generations when we proceed to rapidly deplete non-renewable fossil fuel reserves on the one hand, and alter the composition of the atmosphere on the other.

Advances in genetic engineering and fundamental intervention into life's reproductive processes is pursued with little debate on the possible long-term consequences - physiological, ecological, social, or the more subtle existential or metaphysical consequences.

Because our current development path is unsustainable, we are running the risk of a sudden collapse or a series of collapses (e.g. of business investment, or of ecosystems, and ultimately major disruption to global food production) due to overshoot, possibly resulting in the deaths of large numbers of people in the future.

In short, we need to hold ourselves accountable to the fact that we are currently putting future generations at high levels of risk and jeopardising their quality of life.

## **6. From a traditional to a transformational civilisation**

The 20th century marks the transition of society from a largely traditional culture to a transformational one. It means that change is a more pronounced feature than stasis, that the ways people relate to each other, the tools people use and the products and services they consume vary radically from one generation to the next.

A traditional civilisation, it can be argued, has less of a need to consider the needs of future generations because circumstances and the natural and social environment will be largely unchanged. A transformational civilisation, on the other hand, must more carefully consider the needs and wellbeing of future generations due to the increased risk of a



significant deterioration in both the natural and social environments, i.e. the quality of life, irrespective of the fact that a transformational civilisation is *also* more likely to significantly *improve* the quality of life for future generations.

## **7. The environmental movement looks to future generations**

Although it appears that there never existed a strong tradition of concern for future generations, at least in Western culture, it appears that such a tradition may be emerging, with its origins grounded in the environmental movement, and more specifically, in the study of environmental ethics. Here it must be said that *avant garde* environmentalists such as the Deep Ecologists have yet a higher agenda. Although we need to consider the rights of future generations, we also need to move beyond an anthropocentric view of Nature, and recognise the intrinsic right of species and ecosystems to exist irrespective of their utilitarian or aesthetic worth to humans.

The collision between ‘development’ and ‘environment’ led to theories on ‘sustainable development’.

The World Commission on Environment and Development encapsulated what is now a benchmark definition of sustainable development, and fed the concept of ‘intergenerational equity’ into popular consciousness:

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. [7]

Only ten years later we could rewrite this definition:

Sustainable development is development that preserves the integrity of the biosphere and enhances the quality of life of the current generation without compromising the quality of life of future generations.

A debate concerning the rights of future generations has centred on the problem of how rights and laws can apply to people who do not yet exist and who cannot be specifically identified. A simple solution to this problem is to frame our responsibilities to future generations in terms of charitable trust law, which could be termed an ‘intergenerational trust’, and which does not require specific people as targets of goodwill or bearers of rights (Weiss 1984).

Derr (1973) argues for an expansion of (what I refer to as) our active future timescape:

Conceivably...we could institute programs that would improve conditions of life for the next three or four generations, yet prove fatal to mankind (sic) after that... In order to avoid disaster by postponement of consequences, our notion of the proper care of the earth has to reach imaginatively far into the future.

In a simple yet powerful line of reasoning Derr (1973) bypasses the sophistry of many ethicists debating whether *non-existent* future generations merit any sort of rights. He suggests that a society, which fails to care for the future, has lost its sense of purpose and thus its capacity to deal with the present.

Green (1977) uses a Rawlsian reciprocal moral approach to future generations (eg ‘Do unto them as you would have them do unto you...’) which is based on a hypothetical (as opposed to a real) contract. To decide on a morally justified policy we may ask ourselves the question: ‘Which policy would I find most advantageous if I were deprived of the knowledge of the generation to which I belonged.’

One might add - ‘and also deprived of the knowledge of class, gender and race.’

Green proposes three axioms as guides to intergenerational responsibility:

1. We are bound by ties of justice to real future persons.
2. The lives of future persons ought ideally to be ‘better’ than our own and certainly no worse.

3. Sacrifices on behalf of the future must be distributed equitably in the present, with special regard for those presently least advantaged.

The second axiom instantly raises questions of what is 'better' and what constitutes a rising quality of life. Quality of life indicators (QLIs) attempt to define parameters in this regard. Green focuses on the easier question of what constitutes a *decreasing* quality of life. Baier (1973) takes a similar approach when she says that

One obligation that every generation has toward subsequent generations is to leave 'as much and as good' of the public goods previous generations have bequeathed them.

The problem with this approach is that one can justify, for example, the loss of some species of animal or plant by saying that it is compensated for by the creation of new and useful technologies. The net public good remains the same or better.

The third axiom reinforces a myth that improved circumstances for future generations must entail sacrifices in the present. It is analogous to the myth that measures to improve energy efficiency inevitably involve a net cost (e.g. in labour or materials). But experience shows that energy efficiency programs usually result in net savings by stimulating new techniques and technologies (Lovins 1997).

More than likely, *serious and detailed consideration of the needs of future generations will bring about positive changes in the way we do things today which will result in a win-win outcome for all.*

Finally, a fourth axiom might be added:

4. Concern for the quality of life of future generations must not compromise the quality of life of the current generation.

We must reject the assertion and repugnant implication of Garrett Hardin (1974):

Every life saved this year in a poor country diminishes the quality of life for subsequent generations.

#### 8. Timescape - a capacity to appreciate future generations in depth

‘Think of your forefathers! Think of your posterity!’

John Quincy Adams (1767-1848)

We can move beyond the abstract and remote notion of ‘future generations’. Heilbroner (1974) speaks of the need to form a ‘bond’ with future generations.

There is only one possible answer to [the question of impending environmental and social crises]. It lies in our capacity to form a collective bond of identity with...future generations... *Indeed, it is the absence of just such a bond with the future that casts doubt on the ability of nation-states or socio-economic orders to take now the measures needed to mitigate the problems of the future.*(italics in the original)

In an investigation into what might motivate the current generation to consider future generations, Norman Care (1982) touches on four human capacities: love and concern; community bonding; an extended sense of shared fate; and a sense of justice.

Contemporary media and mythology emphasises the possible extreme differences between future generations, for example, and us 500 years from now. This contributes to a sense of *intergenerational alienation*. We could also discuss the probable *similarities* between us and future generations 500 years from now. Were people so different from us 500 years ago? Even 5,000 years ago? One only has to experience tribal cultures today who have had relatively little outside contact (eg see Nance, 1974) to realise that their humanity makes it is not so difficult to identify with them.

Callahan (1971) echoes this sentiment:

I see no reason to suppose that future human beings will have desires and ideals dissimilar to our own.

One could pose the question, how can a person 'bond' with something that does not yet exist? It happens all the time. Grandparents lovingly knit booties for as yet unborn babies, while parents have been known to adorn a child's room even before the wife has become pregnant or the adoption papers have been processed. Many millions of people experience feelings of intimacy, love and bonding with a God they cannot see hear or touch. The sentiments and behaviour are not necessarily misplaced, meaningless or ill founded.

There are many levels on which we can engage with future generations, (and similarly with people in past generations).

- appreciation to appreciate that they *will* exist, to develop an interest and concern.
- capacity to expand one's timescape, both passive and active, to have a sense of depth (in time) and a sense of relative position in that depth.
- knowledge a knowledge of history, of tools and methodologies for considering the future, and a knowledge of alternative futures.
- understanding intuitive, of the process of history, evolution of events, continuities and discontinuities, revolutions etc, of power structures in society, of the social construction (interpretation) of history, and social construction of the future.
- empathy identity with, bonding, sense or responsibility for future generations.

The suggestion here is not merely to assemble a more intellectually sophisticated way of considering the future, so much, as to formulate a strategy to stimulate the general population into acquiring an appreciation, a capacity and an empathy for future generations, by promoting the subject in the popular media, to sow it in popular discourse in a way that gives depth, form, and a certain tangibility to these people, our direct descendants, who will exist because of us, and who will be walking around where we once walked, experiencing many similar feelings and thoughts, delights and dilemmas, during the coming millennium.

## 9. Measuring the quality of life

We have to decide what current needs have priority over the future, and when, on the contrary, the future's claim against the present must be honored. Such decisions will require us to determine what people really need, what is a responsible use of property and resources, what is an adequate level of life. (Derr 1973)

Concern for future generations means concern for their quality of life. Thus we need to explore what we mean by 'quality of life'. To improve the quality of life of the current generation, the imminent generation and beyond, it is necessary to develop quality-of-life indicators (QLIs), despite the inherent difficulties in quantifying quality.

The current dominant measure of the quality of life, is Gross Domestic Product (GDP), which is a rough guide to standard of living but which fails among other things to measure disparity of income within a nation. GDP recently deposed GNP as the dominant standard measure, both of which evolved from work by the economist Kuznets around 1932. In 1962 Kuznets wrote of his concerns that quantity of economic growth was being confused with quality of economic growth (Rowe et al 1995), but in a sense it was too late. As Henderson describes it

GNP is a malfunctioning strand of our 'cultural DNA code' - carrying erroneous information and signalling to the body-politic a form of growth analogous to that of cancer cells which consume the host's body. [8]

The World Bank continues to use GDP as 'the main criterion for classifying economies', but recognises that it fails to measure the degradation of the natural resource base. In 1995 the World Bank produced the Wealth Index which has been praised for its quantum leap forward in thinking. It has four components:

- natural capital (natural environmental resources) 20%
- produced assets (factories, infrastructure, financial assets) 20%
- human resources (educated, healthy productive people) 30%

- social capital (families, communities, institutions)	30%
TOTAL	100%

While the emphasis on human and social resources is commendable, natural capital is still valued by using ‘willingness to pay’ (WTP) and other shadow price mechanisms. According to Henderson (1996):

The only legitimate pricing of such social and environmental amenities is that of using replacement cost which will prove optimal for longterm evaluation.

A plethora of new QLIs has been developed over the last few decades. Perhaps the most widely recognised of these is the Human Development Index (HDI) developed by the UNDP. Launched in 1990, it has been criticised from both ends of the political spectrum for bizarre implications arising from its trade-off of longevity with income (Ravallion 1997), to its aggregation of statistics which can subsume important policy issues (Henderson 1996).

The United Nations lists a number of other indicators including:

- SNA(1993) (UN System of National Accounts 1993)
- EDP (Environmentally Adjusted net Domestic Product),
- ENI (Environmentally Adjusted National Income),
- SNI (Sustainable National Income) and,
- FISS (Framework for Indicators of Sustainable Development)

Other international contenders include:

- ISEW (Indicator of Social and Economic Welfare) Herman Daly, Clifford Cobb
- GPI (Genuine Progress Indicator)
- ISP (Index of Social Progress) developed by Richard J Estes in 1972.
- PQLI (Physical Quality of Life Index) developed by David Morris
- ISH (Index of Social Health) developed by Marc Miringoff

- Wealth Index (1995) World Bank
- CFI (Country Futures Indicators) developed by Hazel Henderson
- Calvert-Henderson Quality-of-Life Indicators
- QIP (Quality Indicators for Progress)
- World Times Triangle Index of the Wealth of Nations

Debate remains as to whether indicators should be aggregated into a single index - easily digested by the popular media, or presented unbundled so that assumptions, weighting and other issues become transparent. But the synthesis of this debate is to provide a single aggregated index, so that it can gain widespread currency, but make access to component indicators, assumptions, weighting etc readily available for those who wish to inspect them more closely (e.g. by including the Web address).

There is a danger that the world community will be bombarded by such a confusing array of new indicators that they will lose their popular interest and political significance.

Perhaps we need to establish an internationally accepted standard for a quality of life indicator (QLI), comprising multiple indicators, for the year 2000, endorsed by the United Nations, World Bank etc which could be awarded an ISO number (International Standards Office). This standard could be refined or modified at periodic intervals, e.g. every five years, but not more often than national statistics bureaux could manage. Poorer countries already have difficulty in meeting current statistical survey expectations.

With such consensus, we could get on with the real issue of upgrading the quality of life for the world's disadvantaged! - as well as consider how trends may affect the various components of the QLI, one, two, three or more generations down the track.

It is sobering to realise that the GNP/GDP indicators, though crude as they are, have been in place for approximately 50 years, with little progress attained in real income for the majority of the world's people, and even a decreasing real income for many. It is therefore important to consider just how an enlightened QLI standard might fillip the world's



leaders, political, business, community and otherwise, into coordinated, effective and appropriate action.

A focus for action and a measure for success should be the resolutions and commitments undertaken at the various world summits, including:

World Summit for Children, New York, 1990

Fourth World Conference on Women, Beijing, 1995

Earth Summit, Rio de Janeiro, 1992

Habitat II Summit, Istanbul, 1996

World Conference on Human Rights, Vienna, 1993

Food Summit, Rome 1996

Int. Conf. on Population and Development, Cairo, 1994

Microcredit Summit, Washington 1997

World Summit for Social Development, Copenhagen, 1995

Global Knowledge 97, Toronto 1997.

Despite the need for a new dominant QLI in the short term, the debate over what constitutes an enhanced quality of life should continue. To this end, the author suggests that QLIs can be considered under four broad categories:

1. Quality of life
2. Equity of quality of life
3. Integrity of quality of life
4. Security of quality of life

1. *Quality of life - economic, social, environmental indicators.* The World Times Triangle Index gives equal weight to these three components. Economic indicators need to recognise the value of unpaid work such as work in the home, presumption [9], voluntary community work etc. Much more could be said of these indicators, but space does not permit here.

2. *Equity of quality of life - equity of quality, not just averages.* Income disparity has itself become an indicator, which has been bundled into QLIs. But the question of disparity of overall quality of life within a nation has yet to be addressed. It makes sense that it should remain outside the chosen QLI package.

3. *Integrity of quality of life - quality of the whole; quality of larger components - cultures, communities, biomes, ecosystems, minorities; the quality of relationships - of individuals to each other, to larger components, and to the whole.* In what may be a forerunner to measures of integrity, Alan Slifka is developing a 'coexistence index' to measure community integration or cohesion.

4. *Security of quality of life - quality of life through time, across generations, stability in the quality of life.* One measure might be to assess the degree of consideration and precautionary policies implemented by the current generation to ensure the wellbeing of future generations.

Like the concept of 'equity of quality of life', 'integrity' and 'security' represent vectors of the quality of life and thus it is perhaps not appropriate that they be bundled into the QLI package.

A concept which threatens to undermine the whole process of developing universal QLIs, is the concept of self-determination - the importance of individuals and communities to create their own definitions of quality, as well as the subjective, relative dimension to quality of life. A universal QLI, it could be argued, attempts to force different cultures into a single cultural paradigm. What do educational and health services mean to a Yagua Amazon Indian, for example, other than a disruption to their traditional lifestyle and culture? The dilemma is nothing new. It explains the common retreat by many development theorists from specifics (income, services etc) to concepts of choice and opportunity.

Another shortcoming is the use of nation-states as a unit of comparison. Countries often contain contrasting cultures with different *Weltanschauung* (worldviews), with different ideals and expectations. Perhaps communities could be grouped according to their similarity in definitions of quality of life, and comparisons made internal to the grouping (though ultimately, some sort of inter-group comparison would need to be made).

## 10. Dialogue with the future

“To Our Children’s Children’s Children’s Children”

LP Album by the Moody Blues - 1969.

My daughter was born in 1991. If she one day bears children who go on to have children etc, successive generations (taking a generation as averaging 33 years) may be born in the years 2024, 2057 and 2090. What might a great great grandchild born in 2090 (now reflecting in the year 2111 at the age of 21) have wanted their great great grandparents to consider in 1997? What amongst the following would have been your priorities?

- Advance our weapons systems in an effort to maintain a secure and stable world order?
- Advance space colonisation to provide new opportunities for travel and discovery?
- End hunger and poverty?
- Advance our technologies and industrial capacity to provide new and wondrous consumer goods?
- Protect all remaining high-value habitat and species, and regenerate other areas?
- Irrigate the deserts for productive use, or leave them in their pristine condition?
- Develop new ethics, institutions and conventions to minimise if not put an end to armed conflict?
- Make a rapid transformation to sustainable development?
- Promote alternatives to consumer society, such as a renewal of spirituality and other ‘higher order’ pursuits?

- Restore traditional family structures and values for the psychological wellbeing of children or
- Allow new structures, which may offer more individual freedom, flexibility and social maturity?
- Reduce wealth disparities or maintain a strong incentive to prosper?
- Strengthen the work ethic so as to be able to commit human resources to overcoming our
- Problems and constructively directing our energies, or overthrow the work ethic, preferring instead to work less and consume less.

**11. On the eve of a New Millennium (Christian calendar): a metapoint, an opportunity**

*For the cause that lacks assistance*

*For the wrong that needs resistance*

*For the future in the distance*

*And the good that I can do*

‘Daisies in the Grass: What I Live For’

George Linnaeus Banks 1821-1881

The eve of the New Millennium is a ‘metapoint’ [10], an opportunity to reflect and make changes. Let one of our New Millennium Resolutions be

To expand our vision (active future timescapes) from 25 years to 1,000 years  
 - that is, until the end of the Third Millennium (Christian calendar).

By the end of the Third Millennium, technology will probably change beyond recognition. So too will lifestyles and employment, production, infrastructure, travel, culture, art, science and politics. The inhabited world will probably have extended considerably into space (but still within our solar system?). There may be new and radically altered lifeforms. Life expectancy will probably have doubled, quadrupled or more. The

distinction between natural and artificial may be less clear, as may the distinction between animate and inanimate. Intelligence will probably have escaped the confines of the human mind. The pace of change may accelerate further, or it may slow down, or fluctuate. On an ethical level, we probably will have advanced; or we may have regressed.

However, the fundamental questions as to the purpose of life and death, and the essential enigma of human existence will not change (despite the farcical confidence of many neuroscientists). And the fundamental qualities that make us human - our innate *capacity* for caring and sharing, also, will not diminish.

### *Notes*

[1] Ironically, although the concept of future generations has not figured highly in the literature, the practice of authors dedicating their books to their children, as if they were making a contribution to posterity, has been widespread for a long time.

[2] The term 'timescope' might be more closely connected with 'sight' but its association with 'microscope' and 'telescope' imply a restricted (specialised) field of vision.

[3] or 432 billion Hindu years of 360 days each (Encyclopaedia Britannica 1997). Another source puts the Brahman life at 155,520 billion years (Joseph W Elder - Collier's Encyclopaedia 1994, p128)

[4] Incidentally, the most widely accepted contemporary cosmological model suggests we are not yet halfway through this cycle since the universe is still expanding. The universe may eventually begin to contract, but may not contract uniformly, unlike its apparent uniform expansion.

[5] Global Biodiversity Assessment (1995) United Nations Environment Program (UNEP)

[6] Gaia Atlas of Future Worlds, 1990.

[7] WCED World Commission on Environment and Development, 'Our Common Future' (Brundtland Report) 1987 Oxford University Press.

[8] Henderson, Hazel 'Our Planet' Vol7 No 1 p15

[9] presumption - consuming what one produces, after Toffler, Alvin, 'The Third Wave' 1980.

[10] 'Metapoints' or 'metamorphic advantage points' are moments in time particularly propitious for change. See Global Futures Bulletin #22, 15 Oct (1996), (ISSN 1328-5157) 'Metapoints'.

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