

# FUTURE VISION IN THE NUCLEAR AGE

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The purpose of this paper is to show that a basis exists for elaborating sustainable and convivial futures. The paper argues that nuclear weapons are rooted in primitive impulses and perceptual defects which spring from the prehuman past, and that it is a mistake to approach the nuclear dilemma as though it were a technical issue. Real progress lies less with the continued elaboration of technical systems than with human action and human development.

*Keywords:* future studies; interpretive perspective; transpersonal view

THE WESTERN WORLD is caught within a profound dilemma. It has built a way of life which breaks with the past and yet sustains few compelling visions of livable futures. Deprived of roots and of direction Western cultures exhibit a frantic presentness, a withdrawal to the 'here and now' in which the pain and conflict of mental/egoic life is partially assuaged by the marketing and consumption of substitute satisfactions, of avoidance.<sup>1</sup> Far from embodying some higher vision of human life and purpose, contemporary culture exhibits many symptoms of a profound malaise: dissociation, regression, psychosis, paranoia. The most extreme of these symptoms is to be found in the existence, elaboration and deployment of nuclear weapons.

Nuclear weapons are the embodiment of technocratic barbarism. They are not simply an accidental side-effect or minor aberration, the result of a temporary bout of insanity or a political misjudgement. Rather, they may be regarded as an outgrowth and consequence of an alienating mode of consciousness which has become split off from its human, environmental and spiritual sources through a long historical process.<sup>2</sup> The fact that human life now appears to be framed within such cramped and, indeed, subhuman dimensions encourages a sense of impotence and short-sightedness which particularly affects the young. As one researcher wrote,

a serious disillusionment is taking place—some children are reluctant to trust adults who are passing on to them such a dangerous and conflict-ridden world, whilst at the same

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time expecting children to behave peacefully. There is little incentive to grow up and every reason to dwell in the here-and-now, preferring whatever immediate and short term pleasures and excitements are available.<sup>3</sup>

Within the vacuum of an unrecognizable past and an unthinkable future, the present splinters into incoherent fragments: a mosaic of images, impressions, slogans and entertainments. Within such conditions the sense of self, the very category of human agency, becomes problematic.<sup>4</sup> As Fraser notes, "we live in an age when faith is ready to grasp everything and believe anything for the sake of belief, as the mind struggles with its conflicts within the confines of individual selves."<sup>5</sup>

Fears of nuclear devastation are reinforced by wider uncertainties about the development and control of other sophisticated technologies. In fact the latter have come to appear so powerful, so determining of their social contexts, that many images of futures are largely images of possible future states of *things*. That is, of giant (or miniaturized) machines, cityscapes, arcologies, rocket ships, space stations, L-5 colonies and the like.<sup>6</sup> This preoccupation with techniques, technologies and machines did not spring without warning into the twentieth century. What is new is the *extent* to which person/machine relations have been inverted over successive technological revolutions and incorporated into the nuclear state.<sup>7</sup>

This is not to suggest that a conscious conspiracy has taken place. It is rather that certain preoccupations and modes of perception became established in stratified societies long before their full implications could be seen. Now that the implications are more clearly evident, we require a basis for articulating wholly different futures from those now in prospect.

Above all I am concerned to show that it is possible to renegotiate meanings and commitments which have been uncritically carried over from the past (see Exhibit 1 and Figure 1). It should be noted, however, that I am not attempting to debate the technicalities of arms control or of the regulation of advanced technologies *per se*. I take the view that large-scale technical problems cannot be satisfactorily resolved without reference to the human attributes and perceptions upon which they depend. To negotiate new, or renewed, visions of sustainable futures requires that we examine many entrenched assumptions. By so doing, new avenues of human and technical development can be discovered. I want to retain a primary role for human action and to see this as the main key to the future evolution of social and technical systems.

### Roots of the nuclear threat

Building nuclear weapons is a long, difficult, hazardous and very expensive process entailing a diversion of energy, skill, knowledge and resources on an enormous scale. So enormous is this diversion, in fact, that in money terms alone, the full costs far exceed the GNP of many nations.<sup>8</sup> In wider terms, the full social, cultural and environmental costs are almost beyond calculation. A true accounting would have to include not only the squandering of irreplaceable natural assets, radioactive contamination, living under constant threat and fear but also the 'opportunity cost' of paths not taken, species not saved, hospitals not built, agricultural projects not started and lives not preserved.

## EXHIBIT 1. CRITICAL FUTURES STUDY AND THE TRANSFORMATIVE CYCLE

A central concern of critical futures study is its focus upon transformations of meaning. It takes the view that underlying assumptions are often overlooked in familiar debates about energy, resources, the environment and futures. To be 'critical' in this context has less to do with an act of criticism than with:

- being reflexively aware of one's own presuppositions and debt to a particular culture and speech community;
- drawing selectively upon concepts from critical theory, particularly Habermas's account of cognitive interests; and
- recognizing meanings as being fluid, negotiable and open-ended.

An outline of the approach is given in "Towards a critical futurism".<sup>a</sup>

The transformative cycle is a general purpose tool derived from this work and that of O. W. Markley.<sup>b</sup> It can be used in a variety of contexts. In the version given here, there are four main stages. These may be added to, altered, or deleted as necessary.

In workshops and in-service teacher training I often begin with *breakdowns of meaning*. In practical terms this can refer to problems that are of immediate interest and concern to people. However, not all breakdowns are necessarily problems and one may begin at any stage according to the needs and purposes of the user. Moreover, the cycle can be used to examine the development of a single issue over time or to provide a cross-section of several issues at any particular moment. Some suitable candidates for the breakdown stage include: the changing meaning of work and leisure, unemployment, the decline of the nuclear family, patriarchal values, urban decay and defence.

The stage of *reconceptualizations*, or possible resolutions, draws upon solution-oriented work both within the futures field and outside it. Here can be found a very wide spectrum of proposals, suggestions, new, or renewed, meanings. For example: the social wage, non-nuclear defence, ecological ethics, small-scale economics, self-reliance. It is characteristic of such proposals that they tend to challenge the presuppositions of dominant social interests; and that far more proposals are put forward than are ever taken up. Elise Boulding has discussed these processes in terms of the dynamics of imaging futures.<sup>c</sup>

The two other stages of the cycle as given provide space for noting down *negotiations and conflicts* and, finally, the question of *selective legitimation*. It should not, of course, be assumed that the proposals which receive legitimation necessarily constitute 'best fit' solutions! This is one reason among many why the cycle does not end with a seemingly 'successful' resolution. Another is that negotiations of meaning seldom yield permanent solutions. With passing time the old answers cease to 'fit' external conditions and again become problematic.

## Notes and references

- a. R. A. Slaughter, "Towards a critical futurism", *World Future Society Bulletin*, 18, (4), 1984, pages 19–25; and 18, (5), 1984, pages 11–21.
- b. O. W. Markley, "Human consciousness in transformation", in E. Jantsch and C. H. Waddington, editors, *Evolution and Consciousness* (New York, USA, Addison Wesley, 1976).
- c. E. Boulding, "The dynamics of imaging futures", *World Future Society Bulletin*, 12, (5), 1978, pages 1–8.

Contrary to widespread belief, a distortion of this magnitude did not arise with the conjunction of short-term historical, political or psychological factors. While the precise form of the weaponry is indisputably recent and the theories that permitted the construction of nuclear arsenals date only from the middle of the present century, the impulses and perceptual defects that sanctioned the chain of developments culminating in the nuclear weapons industry are much older. For example, Lewis Mumford has described how the large-scale organization of people and machines in pursuit of abstract, life-denying ends was fully established in the pyramid-building age of Egypt. His term for this compulsive and dehumanizing form of organization is 'the megamachine'. Within it rationality is deployed to serve irrational ends, the organic context is forgotten, individuals become subordinated to technocratic imperatives and a

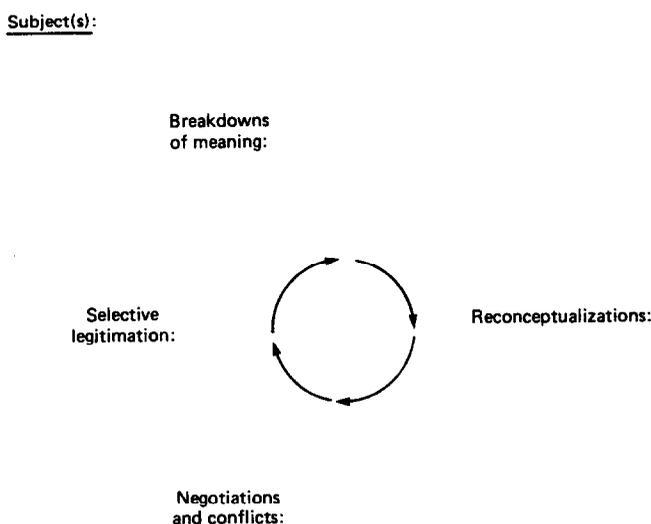


Figure 1. The transformative cycle: a technique for understanding change

'God-king' figure rules with an iron fist.<sup>9</sup> In this view, the Third Reich and the present-day nuclear state are but the most recent variations upon an ancient model.

Underlying the structure of the megamachine are modes of consciousness which are truly primitive: fragmented, exclusive, partial. As Wilber notes, "the earliest stages of mankind's evolution were dominated by, although not defined by, subhuman and subconscious impulses".<sup>10</sup> The point I want to emphasize is that much of subsequent history can be interpreted *both* as a growth up and out of undifferentiated one-ness with nature (permitting conceptual explicitness) *and* a series of regressions according to higher order (and hence more damaging) conceits. Each stage in the unfolding of consciousness appears to have been typified by greater differentiation and clarity on the one hand and greater technical power accompanied by *hubris* on the other.<sup>11</sup> Moreover, since these processes still remain largely unacknowledged they have not, on the whole, been brought to full consciousness, worked over and transcended. Take the example of the substitute sacrifice. This represented an attempt to 'buy off', to propitiate, blood-hungry deities and therefore to purchase a little time, a little mortality, for oneself and/or the local community. In this incarnation the Earth Goddess devours her own children and impersonal cruelty is accepted as one of the mainstays of collective life.<sup>12</sup> The startling thing is not that this atavism persisted up to the time of the Aztecs and Toltecs but that it was systematized by the Nazis and then domesticated via endless fictional representation into entertainment by the television and film industries. A diet of simulated violence and terror is not basically escapist. It is an ancient form of reassurance and comfort: since it's happening to them, I'm safe for the time being. The technology may be recent but the human mind remains caught up in its own prehistory.

According to Wilber our present level of "egoic self-consciousness is halfway between the subconsciousness of nature and the superconsciousness of spirit".<sup>13</sup>

Egoic self-consciousness is both a tremendous achievement and, in its unreformed condition, a terrible liability. For in the West the analytic clarity made possible by differentiation and development provided the ground for *an instrumental mode of consciousness* best summarized by Bacon's aphorism "knowledge is power" and culminating in the nuclear arsenal.<sup>14</sup>

In transcending raw nature, people forgot that they were still part of it and on the whole did not yet recognize that beyond the ego lie higher, unifying, powers and capacities. This process of alienation from the natural world and the creation of new splits between and within individuals represents an important part of the psycho-historical ground from which weapons of mass destruction have risen. It is for this reason that the attempt to develop future vision must deal with underlying issues which represent 'unfinished business' for the race. The issues include the use of boundaries, fear and the stranger, instrumental rationality, systems of exploitation and repression and the nuclear state itself.

#### *False boundaries*

In Western culture boundaries seem as natural as the day. Indeed, much of that culture rests on systems of analytic classification which separate one class of phenomena from another. Boundaries are inscribed not merely on maps but within minds through language. They give rise to dualities and opposites such that discourse often swings wildly between extremes (friend-foe; yes-no; positive-negative) rather than embracing the middle ground between. However, the language of opposites is the language of manufactured conflicts and hence of battles and defeats. The ease with which the human mind leaps from one pole to another, changing things, people, concepts into their opposite is known as *enantiodromia*. The instabilities thus generated indicate a defect in inherited modes of perception, a lack of rootedness which, when projected upon the outer world, sanctions much conflict. For the primary fact about boundaries is that they are illusions which are 'read upon' an indivisible and seamless world. They are habits, conveniences or, at best, mental tools having no real ontological status.<sup>15</sup>

Boundaries are often confused with lines. A line allows me to distinguish my being from yours, country A from country B—it recognizes differences without separation. But a boundary creates a gulf between us which is pure illusion, the precursor of conflict and struggle. However, since boundaries are not natural features of the world they may be refused or transcended for higher order wholes. To the extent that this occurs, the seeds of conflict and alienation can be eliminated. It is hard to be enemies when we occupy the very same ground of being. Aggression begins to look foolish when we pay attention and notice the absurdity of the enantiodromic shadow play.

#### *Fear and the stranger*

Fear may be understood as a consequence of the illusion of separateness, the yield of primitive states of consciousness. It denotes a lack of inner connectedness and a failure to live 'in the present'. Most fear is imaginary, involving projected aspects of the being which have not been acknowledged or owned. It feeds upon the enormous capacity of the mind to conjure with illusions, to stay around unproductive habits, attitudes and influences. Fear and avoidance may

constitute rational responses to immediate physical danger, but most threats can be reinterpreted as sources of concern which imply some kind of corrective action.<sup>16</sup>

Unresolved fear is corrosive and intimidating, contributing finally to the paranoia that fuels the arms race. *The latter has no technical solution because it is not a technical problem.* It is primarily a problem of human perception and human development. For many centuries 'the stranger' has acted as a convenient scapegoat for disowned characteristics. Today the nuclear state has taken over this primitive mechanism. Yet no one should be fooled—the stranger is ourselves viewed in the distorting mirror of self-interest or, rather, ego interest. So long as human affairs are focused at the mental/egoic level there can be no lasting solution, for the ego needs constant reinforcement (strokes), support and material wealth to stave off its own inadequacy, pain and fear.

Those who find themselves immobilized by fear may need to look at appropriate therapies—perhaps some form of "despair and personal power work".<sup>17</sup> Others may need to look at patterns of dominance and fear within families, for in reproducing these upon our children we may be reinforcing ancient stereotypes.<sup>18</sup> But the most satisfactory solution to fear is simply to transcend it, to leave it behind. That is, to engage in ways of life, strategies, which lead beyond the ego toward higher and more inclusive states that are less vulnerable, less reactive, no longer under threat. When enough people have made that commitment and have started that transition individually it will be much easier to require it of obsolescent institutions.

#### *Instrumental rationality*

This minimalist variety of thought and belief is one of the hidden costs of technical progress. It has become endemic in Western societies wherein nature has become demystified and human purposes and powers subverted to abstract ends (which include money, profit and power). Instrumental rationality has nothing useful to say about meanings and purposes, which it tends to assume. Rather, it is about the matching of means to given ends at the level of technical processes.<sup>19</sup> Within its own limited terms it permits the assembling and construction of devices and systems of great practical value and power. However, in the process, higher order issues and concerns are either set aside or attempts are made to reduce them to technicalities. *Reductionism* is therefore a hallmark of this system of unquestioned commitments. It can usually be seen operating wherever large-scale, capital-intensive technologies are under development, and is often most visible during public enquiries when there is pressure to reduce questions of value and of purpose to technicalities.<sup>20</sup>

The practical strength of this form of rationality is purchased at the cost of extreme narrowness. It can be regarded as a product of a part of the human mind which has become separated from intuitive, emotional and spiritual sources of valuation and meaning.<sup>21</sup> Hence, its prescriptions can be refused by reference to this wider world of human significance and by exposing the ethical bankruptcy of reductionism whenever it occurs.

#### *Systems of exploitation and repression*

The geopolitical ambitions of the 'superpowers' and their desire to extend

hegemony over mineral resources and strategic areas lead them to be deeply involved in the imposition of such systems upon the greater part of the globe. Or, to put it differently, the arenas of freedom which are so highly valued in the West are purchased at the cost of radical unfreedom at the margins, the client states and former colonies whose aspirations for material progress and development are often systematically frustrated.<sup>22</sup> Berger and others have described in detail the 'pyramids of sacrifice' which appear to be the inevitable result of this kind of regressive international rivalry.<sup>23</sup>

Individually, each of us is linked into, and dependent upon, repressive and exploitive systems at their lower levels: in business, education, race relations, the marketplace and the affluent family. As is now well known, feminists have argued that much of the repressive character of modern cultures can be traced to patriarchal values and assumptions.<sup>24</sup> Since the *effects* of our dependencies and demands are not necessarily 'here and now', not wholly visible in our fleeting and fractured present, they are readily overlooked. But the connections *are* there, albeit removed from immediate perception by limited knowledge, by avoidance and by displacements in space and time. Thus, to engage with, and to dismantle, systems of exploitation and regression, reference to this wider, common world will be needed. Within that wider framework it is possible to derive new, or renewed, understandings and values, to *dissociate* creatively from the mechanisms and agencies of repression and to consciously *associate* with truly progressive forces and enterprises.<sup>25</sup>

### *The nuclear state*

The nuclear state serves to anchor and integrate the factors outlined above: false boundaries, mental/egoic fear and paranoia, a diminished notion of rationality, exploitation and repression.<sup>26</sup> In this view, nuclear weapons are not merely the result of contingent political decisions but, more profoundly, end-products of human obsessions, of perceptual—and therefore political—defects. They are, as I suggested at the outset, manifestations of an alienated mode of consciousness. The latter has given rise to a culture which is dominated by (though not wholly 'taken over' by) technocratic imperatives. That is, "political domination shaped by technical, 'value-free' reasoning" and "the controlling of the human world by principles drawn from the natural sciences or the application of science to machines".<sup>27</sup> This does not mean that decisions at the political level are unimportant. It does indicate the ground from which they may draw much negative power.

Within this context, economics ceases to be concerned with whole persons in their social and ecological context. It readily becomes an instrument of domination in which the cash nexus and the 'rationalization' of material commodities take the place of wider human concerns. As Kovel notes, "the great triumph of capitalism has been to make this entirely historical arrangement seem natural and timeless." He adds,

It is a triumph, however, which spells disaster unless it is overcome. For at the heart of the principle of the economic lies estrangement from nature. More than estrangement, the deadening of nature: the forcible conversion of the living world to a realm of exchangeable things suitable for exploitation and acquisition—and the reciprocal

conversion of the human self into a vessel suitable for the possession of property in the form of commodities.<sup>28</sup>

Here consumption becomes a substitute for democracy, conviviality and wholeness; and the system survives by inducing the majority to define their needs and their interests as narrowly as possible. In John Berger's view "this was once achieved by extensive deprivation. Today in the developed countries it is being achieved by imposing a false standard of what is and what is not desirable."<sup>29</sup> Hence, there appears to be a profound opposition of interest between the narrow, short-term and underdimensioned imperatives which have been assimilated into the power structure and the authentic needs of men and women.

The false standard permeates to every area of life: to spurious notions of security, sexuality, defence, trade, progress and so on. Sexual oppression, racism, the exploitation of the Third World and the production of nuclear weapons can be seen as constituent parts of a world view which has lost its roots in the experience, aspirations and potentials of ordinary people and transferred its allegiance to the dehumanized fantasies of the megamachine. In this view, much of popular culture—royalty, education, entertainment and marketing—performs a range of diversionary soothing operations upon an often naive and dependent populace. To penetrate through the web of deceit, the lies, misdirections, mystifications, distortions, exclusions, exceptions and day-dreams is not an easy matter. It is far safer and more comfortable to inhabit the margins and accept the status quo. However, given the character of the nuclear state, the very substance of 'safety', 'comfort' and indeed 'common sense' loses validity and meaning. If there is to be a future worth having, it will not be on this basis. For the future of technocracy is, quite simply, a nightmare.

## The future as nightmare

### *Utopia to dystopia*

One hundred years ago Edward Bellamy's optimistic vision of the future, *Looking Backward* (1888), expressed the widespread view that Utopia was within reach. Only 30 years later this optimism was buried in the mud of Flanders and it was no longer possible to imagine a world made sane by the application of science, technology and 'rational' social organization. This transition can be traced in many ways, not least through the career of H. G. Wells whose vision of *A Modern Utopia* (1905) gave way just before his death to *Mind at the End of its Tether* (1945). What Wells had understood was that, whereas tools and technologies considered in isolation could be called 'rational', the system in which they were progressively incorporated was anything but that. And indeed, as the present century has passed the future has looked increasingly dangerous and forbidding such that the dominant mood of most imaginative writing has been overtly dystopian in character.<sup>30</sup>

From Forster and Zamyatin to Capek and Huxley, the dystopian vision clearly articulated widely shared public fears and has since been elaborated and extended by more than one generation of writers, dramatists and film-makers. Far from assuaging these fears, increasing technical sophistication has only

served to fuel them. Dimly perceived though it may have been, C. S. Lewis's aphorism, that "what we call man's power over nature turns out to be a power exercised by some men over other men with nature as its instrument", embodies a profound truth.<sup>31</sup> That truth was demonstrated in the most dramatic way possible at Hiroshima and Nagasaki in 1945, and the reverberations continue to echo through human consciousness more than forty years later. One critic suggests that,

the advent of atomic weapons did more than confirm a growing suspicion that the modern world possessed the means to bring about a man-made catastrophe of awesome dimensions. It helped bring about a consciousness of the future as a kind of *continuing* catastrophe—the mess which we had already made and would have to take special measures to escape. The lesson of Hiroshima was that *it was already too late* to avoid the dark and hostile future which had earlier been feared.<sup>32</sup>

More recently the 'nuclear winter' hypothesis has served to underline both the suicidal character of nuclear weapons and images of the future as nightmare.<sup>33</sup> Haunted by visions of quite unthinkable disaster and devastation, it is unsurprising that a developed sense of the future is lost. But the human cost is considerable:

to lose the future means to lose the past as well, to give up on history. It is to repress the sense of death and life alike, for both . . . can only be experienced as part of a continuum of existence. It is to retreat to the narrowest sliver of the present, and to guard one's interest there in a self-centred manner. Yet we do not succeed in living fully in the present, either—because the only present in which we can live fully is a present into which all existence has been compressed. And so when we lose the future, we lose the present as well.<sup>34</sup>

Yet even as any hope of a livable future has seemed to vanish from public view, so representatives of the nuclear state have attempted to reconstruct a version of it according to the ancient pattern. What is more, they have been working openly and with no lack of support.

*Defending the high frontier—a backward leap for humankind*

As noted above, the vast majority of future images produced in the present century have been pessimistic, dominated by technical developments and overshadowed by the nuclear threat. Yet while affluent populations have withdrawn to a minimal present, a flight away from the wider realities of space and time, powerful interests within the state apparatus—big business, government agencies and the military—have worked to establish their own particular claims upon the future. It is beyond doubt that the services of strategic planners, forecasters and futures researchers have not, on the whole, been employed in the furtherance of any broadly defined public good.<sup>35</sup> Nowhere is this more clear than in the American space lobby.

The present attempt by the Reagan administration to build a space defence against nuclear missiles may well constitute the most expensive avoidance strategy of all time. As is usual, the attention of the public has been diverted by claims about the likely technical efficacy of the proposed SDI or 'Star Wars' system. But once again this is not fundamentally a technical issue. The technology is merely an expression of, and a cover for, institutionalized

paranoia. From the abstracted viewpoint of the nuclear state it is more 'rational' to turn the earth and sky into a battlefield than to address the human basis of its expansionism and fear.<sup>36</sup>

Perhaps the greatest irony of the space shuttle disaster is the genuine sorrow and fellow-feeling expressed by the USSR which, nevertheless, remains the primary target of military strategies pursued via the shuttle programme.

Arguments for the 'industrialization of space' have also been widely rehearsed, the implication often being that 'everyone' can benefit from such developments, particularly if the moon and/or asteroids can be mined for raw materials. The underlying strategic and expansionist objectives have been concealed by a series of claims about the practical utility of orbiting space stations and colonies.<sup>37</sup> Those in favour of the 'high frontier' concept have tended to concentrate on energy questions, manufacturing innovations, developments in communications and remote sensing, even the building of space colonies to relieve population pressure!<sup>38</sup> But, in a paper called *Defending the Third Industrial Revolution*, G. Harry Stine unintentionally or otherwise demolishes the justifications of his more anodyne associates. After outlining the strategic implications of being able to confront an adversary from the 'top' of a 'gravity well' (a position in space 'above' a planet or moon), he writes:

the logical consequence of the gravity well doctrine leads inevitably to the most important military fact of the late 20th Century and the early 21st Century: With improvements in space transportation available and with the technology in hand to maintain long-term military positions in space, the control of the moon means control of the Earth. In like manner, according to this doctrine, control of the L4 and L5 libration points in the lunar orbit means control of the Earth-moon system.<sup>39</sup>

But this is not all. Later the writer describes how a mass driver (a device for propelling materials and cargo from the moon's surface into space) "can be converted into an Earth bombardment system". He adds that "it is a non-nuclear weapon and not subject to existing UN treaties!" (*sic*)<sup>40</sup> Towards the end of the paper, Stine shares his doubts that *any* space settlements will remain peaceful or under civilian control. Moreover, he also doubts if they will be "occupied forever by the sort of hard-working, industrious, peace-loving Anglo-American types now envisaged". For,

one must point out that there are social characteristics of many basically militant Oriental cultures that would make their people optimum space settlers, characteristics such as the ability to live in high-density quarters with little or no privacy, subjugation of the individual to the group, highly structured manners and other inter-personal interfaces, and unquestioning willingness of the individual to follow the directives of authority figures. The military in these cultures now lies barely beneath the surface of the culture, hidden from recent conquerors in some cases.<sup>41</sup>

The paper ends with as classic a piece of unconscious projection as one is ever likely to meet, in a reference to the possibility of coming into contact with "another species that is as mean, as nasty, and as highly competitive as we are".<sup>42</sup> The enantiomorphic contrast between this image, the "militant Oriental cultures" and the "hard-working, industrious, peace-loving Anglo-American types" could not be more stark. It certainly indicates a profound psychic split within Western consciousness which arguably lies at the heart of the nuclear dilemma.

This example of crude technical determinism, paranoia and incipient racism demonstrates very clearly that the elaboration of images of futures from such a deeply flawed foundation is inherently regressive. Futures constructed from unmodified atavistic drives, primitive modes of perception and the extension of existing technical trends and possibilities can be little *other* than a nightmare, a 'continuing catastrophe'. For each increase in technical sophistication and power merely enhances and extends the *range* of existing preoccupations in whatever manner they are currently engaged.

To move decisively away from the many varieties of disaster and disintegration now in prospect, to develop views and visions of futures worth inhabiting, it is necessary to work through and literally to transcend atavistic obsessions, conflicts and the institutions and power structures through which they are at present mediated. Moreover, it is a mistake to understand images of disastrous futures as being merely depressing. As generalized forecasts they may stimulate responses which lead to their own falsification. Empowerment flows both from a refusal to accept depressing forecasts and an ability to grasp, define and negotiate wholly 'other' options. While it is evident that the nuclear state exerts a repressive influence over many human aspirations and needs, the pattern of control is not total. People can, and do, make a difference.

### **Negotiating viable futures**

In a fascinating discussion of Fred Polak's thesis concerning images of futures, Elise Boulding notes how Polak was "angry because he saw his contemporaries failing to exercise a capacity which they still have but might soon lose through disuse". The capacity in question was one which looked beyond "endless projections of present trends and a petty unfolding of technological possibilities which would in the end leave man crippled".<sup>43</sup> In Polak's view, the 'ideal' image of the future incorporated both eschatological and Utopian elements. Boulding summarizes each:

The eschatological, or transcendent, is the element which enables the visionary to breach the bonds of the cultural present and mentally encompass the possibility of a totally other type of society, not dependent upon what human beings are currently capable of realizing. . . . The second element . . . is the humanistic utopian, or immanent, element which designates men as the co-partners in the shaping of the Other in the Here-And-Now.<sup>44</sup>

The delicate balance between the two elements seems never to have persisted for long as different cultures have shifted between God-centred and man-centred views, between optimism and pessimism.

The significance of Polak's thesis here is that, while many have noted the *dominance* of technocracy and instrumental rationality, these diminished views of the world have never been all-embracing, never wholly dominant. There have always been counter-currents, dissenting traditions, spokespersons for fundamentally *human* needs and concerns. During the industrial revolution William Blake, the Romantic poets and early Socialists stood against the prevailing view. In the present century Marcuse, Habermas, Mumford, environmentalists, feminists and the anti-nuclear movement are among those who have helped to anchor and extend a tradition of critique and protest which stands firmly against

depersonalization and technological domination. Within that broad association can now be found precisely the elements which Polak sought and failed to find. While the trends he abhorred have certainly continued, those who have sought a fuller vision of life than the nuclear state can deliver have also made real progress. I now therefore want to outline two perspectives which, taken together, fulfil Polak's criteria and provide a basis for making the imaginative leap towards viable futures. One I have termed '*the interpretive perspective*' since it draws on fields associated with interpretation and the negotiation of meanings. The other is a '*transpersonal view*' which draws on developments in transpersonal psychology and anthropology.

#### *The interpretive perspective*

The notion that words simply mean 'what they say' and that texts embody a coherent experience or 'picture' of the world is a deeply held and comforting one. It is comforting because it preserves a simple view of language and meaning which naturalizes a commonsense, taken-for-granted, view of the world. Yet, like the boundaries they enshrine, the comforts of realism are illusory. They obscure the ideological character and uses of language and leave individuals open to mystification and exploitation. There is insufficient latitude here to permit the full flowering of human communicative ability and expressiveness.<sup>45</sup> In order even to *notice* ideological and linguistic traps (let alone to 'penetrate the fog' and escape them) it is essential to yield some degree of comfort and certainty. In so doing, what is lost in narrowness and naivety can be gained in breadth and freedom to 'speak one's own word'.

Traditional literary criticism concentrated on understanding 'what the author meant' and classifying his/her stylistic attributes according to a pre-defined system of taken-for-granted criteria. Today the writer occupies a less privileged position and texts have been said to provide an open framework for the construction of meanings. While this view may readily be overstated, the reader has become much less a passive observer and more an active participant in the communication process.<sup>46</sup> The reader is fully capable of calling forth meaning, purpose and intentionality from a range of sources, including texts. While in practice some texts may be susceptible to only a limited range of interpretations it is, of course, always possible for the reader to reject textual assumptions and claims, indeed to leap beyond them to quite new areas of concern. The point I want to emphasize is that knowledge is never 'finished' and therefore meanings are always fluid and negotiable.

This brief review of developments in literary criticism is important. For, in presuming a more equal status between author and reader, an important principle can be established which applies equally to other contexts: advertisements, editorials, newscasts, political speeches and images/projects of the future. And what if, too, we enlarged the concept of 'text' and applied it to cultures and traditions?

I have argued elsewhere that, contrary to received wisdom (if that is the right term), our present transition from industrial ways of life is not centrally a matter of economic and technical change.<sup>47</sup> These features are 'noticed' and exaggerated by viewpoints founded upon or conditioned by, instrumental reason. Opposed to this perspective, which stresses externalities, I have suggested that

by understanding the present cultural transition less in terms of the external regulation or control of techniques and technologies, than as a transformative process involving breakdowns and renewals of meaning, we penetrate to the core of all our major concerns.<sup>48</sup>

In my view those concerns are perennial and relate to the constitution of meaning, significance, purpose and value. It follows that since individuals are free to reinterpret texts they are also free to interpret inherited traditions and normative views of 'desirable futures'. In fact, we should doubt if they can do otherwise since meanings are never simply copied, duplicated, taken over intact. If there can be no 'final' or authoritative reading of history or futures, it follows that each person has the same potential right of access to the crucial councils and commitments of the day. Those who so choose can, therefore, without regard for social status or academic qualifications, act as "co-partners in the shaping of the Other", thereby fulfilling one of Polak's two conditions.

It is, of course, quite true that structures of power, privilege, and repression/mystification seriously obstruct the interpretive autonomy of very many individuals and the former will need to be progressively dismantled. But I am not at all sympathetic to that variety of rhetoric and political action which seeks the "destruction of the system". It is not at all helpful to fall back on convenient atavisms to attack a status quo that supports many millions of people in historically unprecedented comfort. The solution is rather to *creatively dissociate* from all that appears unhelpful and to prepare for the leap to higher stages of integration and consciousness, to more inclusive states of personal and social development.

#### *A transpersonal view*

Belief in the isolation and separateness of individual human selves is a very persistent Western myth. In this view personal identity ends at the surface of the skin which encapsulates a single, unitary being. Yet skin-as-boundary sanctions a wide range of self-centred, exploitive values and behaviours which have plagued the history of the species. A more productive view suggests that the surface of the skin is simply a line, and not a boundary at all. Larry Dossey's discussion of "the biodance" reveals some of the interactions between individuals and the wider environment: flows of food, energy, oxygen and relationship in many dimensions. Close regard for these connections reveals our immersion in *a web of being* which ranges from the physical and the energetic to the symbolic, social and spiritual.<sup>49</sup> Moreover, the record of sages and mystics from many cultures shows that this underlying 'one-ness' need not be merely deduced; it can be directly experienced.<sup>50</sup> The path to transcendent awareness is a true and direct one, although it is not particularly easy to achieve. Nevertheless, recognition that there *is* a path *and* a means of liberation from technocracy lends the notion of humanly viable futures a compelling edge.

Humanistic psychology represents an advance over behaviourism and psychoanalysis in so far as its major concern is less with repression and control than with the whole and healthful personality. But towards the end of his life, Abraham Maslow looked beyond humanistic concerns to a small minority of individuals who had passed beyond self-realization to self-transcendence. That is, they had passed beyond personal and egoistic concerns to universal and

transpersonal ones. They tended to: "think in terms of 'planetary humankind' . . . transcend the dichotomy between selfishness and unselfishness . . . be innovators, discoverers of the new . . . shun luxury, possessions, honour and privilege".<sup>51</sup>

The study of transpersonal phenomena is of major interest here because it opens out individual and cultural options for development and change that could not, perhaps, even be imagined from within the confines of a technocratic world view. It provides a basis for renegotiating accepted views of the cultural past and also for making the imaginative leap sought by Polak toward wholly 'other' futures. Ken Wilber is a major exponent of this approach and his works are essential background for those wishing to enter this debate. In *Up From Eden* he takes the view that history may be understood as "a slow and tortuous path to transcendence".<sup>52</sup>

Wilber traces the historical emergence of the ego from the undifferentiated 'ground unconscious' of nature up to the present mental/egoic stage. At each level he distinguishes typical preoccupations which are seen in the cultural record of the period. The scheme is elegant and suggestive. For in venturing *beyond* the mental/egoic it sketches in a framework for human (as opposed to technical) development and aspiration. While the earlier stages operated according to *subhuman*, *subconscious* and *prepersonal* impulses, the higher stages may be characterized by spiritual and *transpersonal* concerns. The evidence here comes both from the self-transcending individuals studied by Maslow and others and from the traditions that were summarized in Aldous Huxley's now-classic work, *The Perennial Philosophy* (1946). This evidence is interpreted to represent the 'growing tip' of human ability and awareness. It is important to note that this does not usher in the millennium. Wilber cautions against 'New Age enthusiasm' and points out that since it took "a terrible 15 billion years" to reach the present stage, the millennium is unlikely to occur tomorrow or next year.<sup>53</sup> He is quite clear that at this point there is only "a significant minority . . . *beginning* the transformation into transpersonal realms". He adds, "we are nowhere near the stage 'beyond reason' simply because we are nowhere yet near universal reason itself."<sup>54</sup> To embrace universally "simple reason" itself would, in his view, be a major achievement.

Levels of consciousness beyond the mental/egoic can certainly be achieved now but may not be widely attained for decades or even centuries. However, understood as contributing to a view of humanly compelling futures, they are of immediate interest and value. Wilber's characterization of The Great Chain of Being (Table 1) provides a general framework of wide practical utility. Just to begin to *think* of the future in terms of subtle awareness, causal insight and ultimate identity (with the Source, Atman, That Which Is) is to radically alter the terms of the debate. Again, the stage of "psychic intuition" is characterized as "the beginning of transcendent openness and clarity, the awakening of a sense of awareness that is somehow more than simple mind and body".<sup>55</sup> Openness . . . clarity . . . awareness. Such terms indicate human qualities and powers which have hardly figured in present-day debates about futures. To begin to place them at the very centre of our future vision is to shift the focus of concern away from technocratic narrowness to the constitution of significance in the wider, common, world-embracing past, present and future. It is to reverse

the ancient reversal: to de-centre the machine and the technocrat, giving back to individuals and groups options that had seemed to be lost in the nightmare of the megamachine.

Some will consider this anti-technology essay falling neatly into well-established British traditions which are both anti-technology and anti-industrial.<sup>56</sup> But, following Habermas, I would want to argue that technologies must serve the human emancipatory interest, not *vice versa*. That very reversal of means and ends can be viewed as one of the central pathologies of the age. Societies constructed upon it are bound to be disaster-prone. More specifically, the notion of wisdom culture provides a much more humanly compelling goal than most of the debased, anaemic views of the future that have so far been put forward: the wired society, the information age, post-industrialism. Table 2 gives some possible features of the Nirmanakaya culture. Each of these attributes stands in sharp contrast with what is now widely considered to be normal. They might even appear unattainable were it not for the fact that this path has already been clearly delineated within the perennial tradition. From such sources develop views that diverge from present preoccupations with what we may *have* to what we may *be*.<sup>57</sup> That is, views of the possible future human being.<sup>58</sup>

**Conclusion: Empowerment and vision in the extended present**

I have argued that viable, sustainable and convivial futures are within reach because human beings possess capacities beyond even the most elaborate machine to remake themselves from within.<sup>59</sup> In this process the disastrous conceits of the armoured ('military') ego, the much-heralded 'computer revolution', space manufacturing and, indeed, nuclear weapons begin to move from the centre to the periphery. In their place arises a human agenda inspired by the perennial tradition and yet reinterpreted continually by changing human

TABLE 1. THE GREAT CHAIN OF BEING  
Unity consciousness

Spirit	Ultimate (Svabhavikakaya, absolute)	Superconscious (transpersonal)
↑ Soul	Causal (Dharmakaya, sagely)	-----
	Subtle (Sambhogakaya, saintly)	Self-conscious (personal)
	Psychic (Nirmanakaya, shamanistic)	-----
Advanced mind	(rational, mental-egoic, reflexive)	Subconscious (pre-personal)
Early mind	(verbal, mythic, social)	
Body	(higher bodily life forms, typhonic, magical)	
Nature	(physical nature and lower life)	

The ground unconscious

In this view the whole thrust of human development is up and out of undifferentiated oneness with nature toward states of clarity and integration which have been foreshadowed by great spiritual leaders.

After K. Wilber, *Up From Eden: A Transpersonal View of Human Evolution* (London, UK, Routledge and Kegan Paul, 1983)

TABLE 2. POSSIBLE ASPECTS OF A WISDOM CULTURE

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Vivid understanding of common humanity and brother/sisterhood
Move beyond roles based on physical differences of skin colour and sex
Growth of mental/psychic clarity
Balanced use of rationality and intuition
Consciousness recognized in each soul and throughout creation
Higher motivations alter economic incentives and theory
Methods and institutions to cure emotional disease and foster growth of consciousness
Education becomes a discipline in transcendence, body to mind to soul
Technology as an aid to transcendence, not a substitute for it
Electronic media as vehicles of bonding consciousness and unity
Outer space as a projection of inner psychic space
Appropriate technology to free material exchanges from chronic oppression
Cultural/national differences set against background of universal consciousness
All people as ultimately one in spirit, and incentives to actualize this
Transcendent unity of all religions
To govern, politicians demonstrate understanding and mastery of body/mind/soul/spirit

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From K. Wilber, *Up From Eden: A Transpersonal View of Human Evolution* (London, Routledge and Kegan Paul, 1983)

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perceptions and needs. For the inner world structures the outer, and in coming to grasp the former the latter is renewed.

One definition of 'vision' is "imaginative insight".<sup>60</sup> Empowerment may be understood as the ability to transmute pain and despair into abilities and constructive projects.<sup>61</sup> If the resources and energies that now serve to sustain fear, avoidance and depression are released in creative enterprises, all the projections of future disaster can be rendered void.

We do need to live fully 'in the present'. But this cannot be achieved within the narrow confines of the alienated and minimal present corresponding to the 'here and now' of Western linear time. As I believe is the case with meaning, temporality is not static and bounded but fluid and open. Here there is great freedom to reinterpret what has for too long been taken for granted, overlooked. The *nunc fluens*, or passing moment, represents a kind of extremity, a paradigm of diminished notions of rationality, understanding, behaviour, now deeply embedded in the epistemology of the West. Infinitely richer is the *nunc stans*, or eternal present, which embraces all space and time.<sup>62</sup> Somewhere between the two there lies a middle ground, a conception of history, time and being which I have called "the wider, common, world" embracing past, present and future.<sup>63</sup> The limits of that wider world are uncertain, dynamic, negotiable, corresponding to the present limits of human imagination, human perception, transpersonal realization. But of one thing I am sure: as the frame of reference widens, as individuals and groups perceive underlying unities and act accordingly, so links that have been broken can be renewed. Yet one major point of difference with past experience now emerges: the 'one-ness with creation' now in view no longer evokes the undifferentiated descent into pre-personal states and conditions. It prefigures the clear light and benign prodromic energy of *transpersonal* insight and vision. Between 'pre' and 'trans' lies nearly everything humankind has ever feared or dreamed of.

The knowledge that permits the mass production of genocidal weapons may never be lost. But it is entirely possible that human beings can learn to address,

and to grow beyond, the primitive impulses and modes of organization which cause our ingenuity to be deployed in such life-denying ways. For this to happen each individual needs to take responsibility for their own involvement in the wider culture.

In this process we require an educational system which can critically mediate between past and future and take full account not merely of some aspects of body and brain but of the whole inner person and its higher needs.<sup>64</sup> We need a politics dedicated to ending repression, exploitation and mystification. We need to envision a society that is fair, open and ecologically sound. Yet for any of this to occur primarily depends upon individuals being committed to their own inner transformation and growth.

The task is both individual and collective. It is practical, political, philosophical, critical and spiritual. We are now at a point where crude reductionist notions of futures can be discarded. Situated as we are, perhaps half-way along 'the Great Chain of Being', it is well within our power to elaborate higher visions of personhood, situate them within some notion of a wisdom culture and thus fully transcend the banalities of technocracy.

*That is a leap worth taking.*

#### Notes and references

1. See K. Wilber, *Up From Eden: A Transpersonal View of Human Evolution* (London, Routledge and Kegan Paul, 1983), pages 1–17.
  2. See T. Roszak, *Where the Wasteland Ends* (Garden City, NY, USA, Doubleday, 1972; London, UK, Faber, 1973); also L. Mumford, *The Pentagon of Power* (London, UK, Secker and Warburg, 1971) for detailed analyses and in-depth critiques of this process. Also see Wilber, *op cit*, reference 1.
  3. R. Davies, *Children and the Threat of Nuclear War* Occasional, Paper No. 8, Centre for Peace Studies, St Martin's College, Lancaster, 1984, page 22. Also S. Jones and H. Saunders, *Growing up in the Nuclear Age* (Avon Peace Foundation Project, 1984).
  4. This thesis has been developed by C. Lasch, in *The Minimal Self* (London, UK, Picador, 1985) although, in my view, his extreme pessimism is largely the product of a radically limited view.
  5. J. Fraser, *Time as Conflict* (Basle, Switzerland, Birkhauser Verlag, 1978), page 254.
  6. This unfortunate and diminished view is commonly portrayed in children's books. For example, see A. Radnor, *Living in the Future* (London, UK, Macdonald Phoebus, 1981).
  7. A lucid and penetrating summary of this process is provided by J. Kovel, *Against the State of Nuclear Power* (London, UK, Pan, 1983). The book provides important background for this paper.
  8. See C. Norman, "Global research: who spends what", *New Scientist*, 26 July 1979, pages 279–281. In part, Norman writes, "the world's R&D system is geared more to the military needs of the 1950s than to the social needs of the 1980s. The development of military technology alone takes up more than \$35 billion a year, roughly a quarter of the world's investment in R&D. More than half a million scientists are also believed to be working on the development of new weapons and defence systems—an immense investment of intellectual resources. Military programmes in fact account for more R&D funds than do energy, health, food production, and environmental protection combined."
- A more recent report revealed that, in the UK, "taxpayers' expenditure on defence research has risen over the past decade to £1.84 billion a year—from 45 to 51.5 per cent of the government's total spending on research and development." Peter Large, "Research cash for defence rising", *Guardian*, 21 January 1984.
9. See L. Mumford, *Technics and Human Development* (New York, USA, Harvest/Harcourt Brace Jovanovich, 1966/67), chapters 8 and 9.

10. Wilber, *op cit*, reference 1, page 7.
11. *Ibid*.
12. *Ibid*, chapters 6, 7 and 8.
13. *Ibid*, page 8.
14. See references in references 2 and 7. Also the commentary provided by D. Held, in *Introduction to Critical Theory* (London, UK, Hutchinson, 1980), especially chapters 5 and 11.
15. K. Wilber, *No Boundary: Eastern and Western Approaches to Personal Growth* (Boulder, CO, USA, Shambhala Publications, 1979), chapter 2.
16. Some of the possibilities are explored in R. A. Slaughter, 'Inventing livable futures', (Lancaster, UK, workshop materials, 1985).
17. J. R. Macy, *Despair and Personal Power in the Nuclear Age* (Philadelphia, PA, USA, New Society Publications, 1983).
18. This line of enquiry is developed by D. Rowe in *Living with the Bomb* (London, UK, Routledge and Kegan Paul, 1985).
19. See reference 14. A concise discussion of Habermas's theory of cognitive interests may also be found in R. A. Slaughter, 'Towards a critical futurism', reprinted in *What Shall We Do Now the Future Is Here?* (Lancaster, UK, University of Lancaster, 1985), pages 8–25.
20. For a detailed account of such issues during the Windscale enquiry see B. Wynne, *Rationality and Ritual* (London, UK, British Society for the History of Science, 1982). Also, more generally see J. Habermas, *Towards a Rational Society* (London, UK, Heinemann, 1971).
21. It is essential to note here that by 'spiritual' I am not referring to rituals or to Western religions but to the higher powers and capacities of human beings as discussed by Wilber and others.
22. See Chomsky's hard-hitting article, 'The little guys America fears', *Guardian*, 22 July 1985. Also Kovel, *op cit*, reference 7.
23. P. L. Berger, *Pyramids of Sacrifice* (Harmondsworth, UK, Penguin, 1976). Also N. Harris, *Of Bread and Guns* (Harmondsworth, UK, Penguin, 1983).
24. Eg see L. Caldicott and S. Leland, *Reclaim the Earth* (London, UK, Women's Press, 1983).
25. See H. Henderson, 'Citizen Movements for Greater Global Equity', *Creating Alternative Futures* (New York, USA, Berkley Books, 1978), pages 351–369.
26. Those who feel that this may be overstated may like to consider Duncan Campbell's 'The chilling effect', *New Statesman*, 24 June 1986. Also his *Big Brother is Listening*, *New Statesman Report 2*, London, UK, 1981.
27. Kovel, *op cit*, reference 2, page 122.
28. *Ibid*, page 128.
29. J. Berger, *Ways of Seeing* (Harmondsworth, UK, Penguin, 1972), page 154.
30. See H. L. Berger, *Science Fiction and the New Dark Age* (Bowling Green, OH, USA, Bowling Green State University, 1976) and M. Hilligas, *The Future as Nightmare* (Arcturus, 1974). Also S. Friedlander *et al*, *Visions of Apocalypse: End or Rebirth?* (New York, USA, and London, UK, Holmes and Meier, 1985).
31. C. S. Lewis, *The Abolition of Man* (New York, USA, Macmillan, 1947).
32. B. Stableford, 'Man-made catastrophes in sf', *Foundation* 22, June 1981, page 77.
33. P. Ehrlich, C. Sagan *et al*, *The Cold and the Dark: The World After Nuclear War* (London, UK, Sidgwick and Jackson, 1984).
34. Kovel, *op cit*, reference 7, page 50.
35. Miles concludes that "at present forecasting is effectively monopolised by the perspectives under whose aegis its dimensions and form have been largely staked out. Far from being neutral, it exists largely to secure an alienated and alienating social order. "The development of forecasting", in T. Whiston, editor, *The Uses and Abuses of Forecasting* (London, UK, Macmillan, 1979), pages 5–41.
36. However, the SDI also has important *economic* objectives. See E. P. Thompson, editor, *Star Wars* (Harmondsworth, UK, Penguin, 1985).
37. G. K. O'Neill, *The High Frontier* (London, UK, Jonathan Cape, 1977). Also T. A. Heppenheimer, *Colonies in Space* (New York, USA, Reinhold, 1977).
38. *Ibid* and see J. Pournelle, *A Step Further Out* (London, UK, W. H. Allen, 1980) for more in the same vein. Two critiques are provided by J. Fowles, 'The improbability of space colonies', *Technological Forecasting and Social Change*, 12, 1978, pages 365–374, and D.

- Deudney, *Space: the High Frontier in Perspective* (Washington, DC, Worldwatch Institute Paper 50, August 1982).
39. G. H. Stine, "Defending the third industrial revolution", *Destinies*, 1, (3), 1979, pages 244–246.
  40. *Ibid*, page 252.
  41. *Ibid*, pages 257–259.
  42. *Ibid*, page 259.
  43. E. Boulding, "Futurology and the imaging capacity of the West", in F. Tugwell, editor, *Search For Alternatives*, Winthrop, 1973), page 77.
  44. *Ibid*, page 78.
  45. See Berger, *op cit*, reference 29. Also J. Habermas, *Knowledge and Human Interests* (London, UK, Heinemann, 1978), *Legitimation Crisis* (London, UK, Heinemann, 1976) and *Toward a Rational Society* (London, UK, Heinemann, 1971).
  46. Two excellent background texts are P. Waugh, *Metafiction* (London, UK, Methuen, 1984), and C. Belsey, *Critical Practice* (London, UK, Methuen, 1980).
  47. Slaughter, *op cit*, reference 19.
  48. *Ibid*, page 25.
  49. L. Dossey, *Space, Time and Medicine* (Boulder, CO, USA, Shambhala Publications, 1982), pages 72–81.
  50. Wilber, *op cit*, references 1 and 15.
  51. M. Boucouvalas, "Transpersonal psychology: scope and challenges", *Australian Journal of Transpersonal Psychology*, 1, (2), 1981, page 139.
  52. Wilber, *op cit*, reference 1, page 7.
  53. *Ibid*, page 324.
  54. *Ibid*, pages 326 and 328.
  55. *Ibid*, page 325.
  56. See M. J. Weiner, *English Culture and the Decline of the Industrial Spirit 1850–1980* (Harmondsworth, UK, Penguin, 1985).
  57. Fromm's book *To Have or To Be?* (London, UK, Jonathan Cape, 1978) develops this distinction fully.
  58. Charles D. Laughlin and Sheila Richardson, "The future of human consciousness", *Futures*, 17, (3), June 1986, pages 401–419.
  59. Erich Harth convincingly portrays our "power of self-reference" from an informed neurological viewpoint. See *Windows on the Mind* (Harmondsworth, UK, Pelican, 1985), especially pages 184–186.
  60. *Oxford Paperback Dictionary* (Oxford, UK, Oxford University Press, 1984), page 756.
  61. This is a central feature of some approaches to Gestalt therapy. See P. Fleming, *The Pellin Diploma Manual* (The Pellin Centre, 15 Killyon Road, London).
  62. See Wilber, *op cit*, reference 15, page 69.
  63. Slaughter, *op cit*, reference 19. Also see H. Arendt, *The Human Condition* (Chicago, USA, University of Chicago Press, 1958), especially pages 50–58.
  64. This was a central concern of, for example, Rudolf Steiner. For a recent example of developments in the area see the journal of the Universal Educational Association *Educare*, PO Box 482, London SE15 6HR.