Futures Concepts

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The futures field is remarkable for its ideas, its literature and range of methodologies, however little attention has been paid to its language and concepts. The longer I have worked in the area, the more I have come to see these as among its key strengths. In teaching futures at the postgraduate level, it is clear that one of the early difficulties facing students is a lack of specifically futures-oriented concepts. This essay suggests that they are essential. Part one considers the role of concepts as the foundation of social foresight. Part two examines a selection of useful futures concepts.

Futures concepts and the discourse they support provide the field with the resources for planning, social innovation and the creation of new projects. This support also contributes to the empowerment of people in the determination of their own futures. However, without some working knowledge of these symbolic materials, the futures field cannot be grasped. Indeed, this threshold problem is one of the impediments to its wider recognition. In spite of this, one of the great benefits of futures concepts is that they permit previously hazy, unknown or unseen structures, choices and so on, to spring clearly into focus.1

Futures concepts can be taken up by many people and used on a wide scale. In so doing they are empowered to contribute to the crucial shifts of perception upon which our future depends. In my view, the most productive concepts are simple ones. This means that they are accessible to young people. However, they also have the propensity to be elaborated in great detail when necessary. Highly elaborate - and I would argue, very powerful - structures of meaning can emerge from simple starting points, as will be seen in the following sections.

In all, over twenty concepts or concept groups are outlined here.2 It is recognised that many others could qualify for inclusion, and that there is bound to be a continuing debate about which concepts are genuinely core and which are not. While there is some benefit in such a debate, it is probably irresolvable given the open-ended nature of the field and its highly permeable boundaries. Hence, the examples of futures concepts given here are provisional only.

Part One: The Path to Social Foresight

At first sight futures may appear to be a highly problematic field of study. Some may wonder how one can study something that does not exist. However, futurists have various ways of responding to this challenge. For example, they may point out that futures studies is not alone in dealing with intangibles. Aesthetics, music, law, ethics and religion also deal with non-material phenomena, but their contributions to human understanding are not thereby diminished. Others say that futures studies is essentially about contemporary ideas, feelings and goals that might influence the future. Still others argue that surrogate or interpretative knowledge can substitute for future facts. This is the view taken here. I refer to the future as a principle of present action because this term highlights the dynamic interactions between the past, present and future. However, for most people the future remains an abstraction. While stereotypical images of futures are widely available in popular culture, few take them seriously or investigate the much wider range of images, scenarios and future histories that are available. Substantive ideas, projects and institutions supporting futures work certainly exist, but they remain all too rare. Thus, for the majority, the future might as well be an empty space for all the effect it has on their daily lives and decisions or their personal and professional behaviour - and hence on social norms, priorities and practices.

It is for these reasons that governments around the world (ever the followers, almost never the leaders) still cling to the habitual short-term horizon of the next election, with little or no thought for the longer-term implications of major empirical and paradigm shifts under way, or an awareness of the great transition collectively facing the human species in the twenty-first century. How then could this apparent abstraction, the future, be made more real, more accessible and more a part of daily life? I do not think that it can be achieved by edict, by threats or
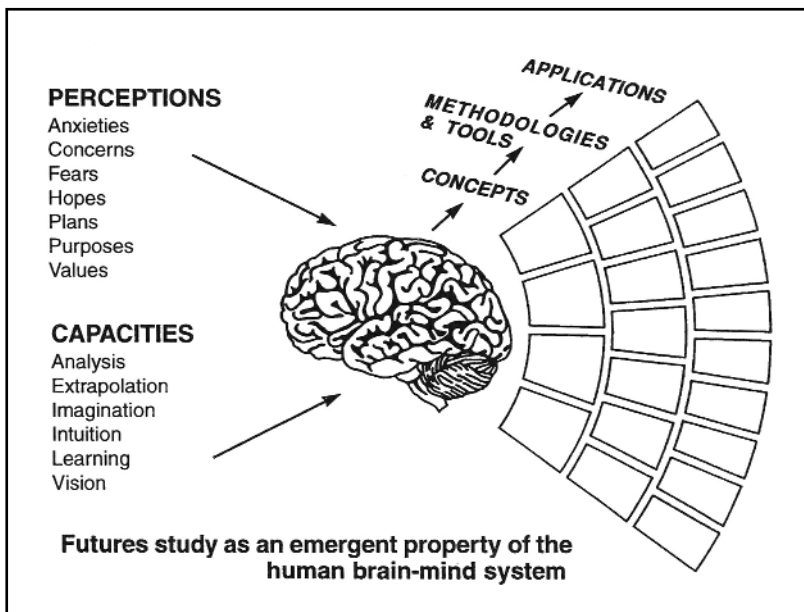
through the seductive simplicities of pop futurism. A different kind of strategy is needed - one that recognises the layered quality of an applied futures capacity (see figure 1). These layers can be built up from the grass roots, layer by layer over a period of time. The rest of this section outlines the role of human capacities and futures concepts in this process.

It is evident that the human brain-mind system is richly endowed with the capacity not just for primary consciousness (awareness of current phenomenal reality) but with reflexive understanding in time. This higher order consciousness is partly characterised by the ability to remember and to learn; to roam consciously throughout a rich, complex, extended present; to understand responsibilities and consequences; and to speculate on futures yet to come. Edelman characterises it this way:

Model of the Core of Futures Studies
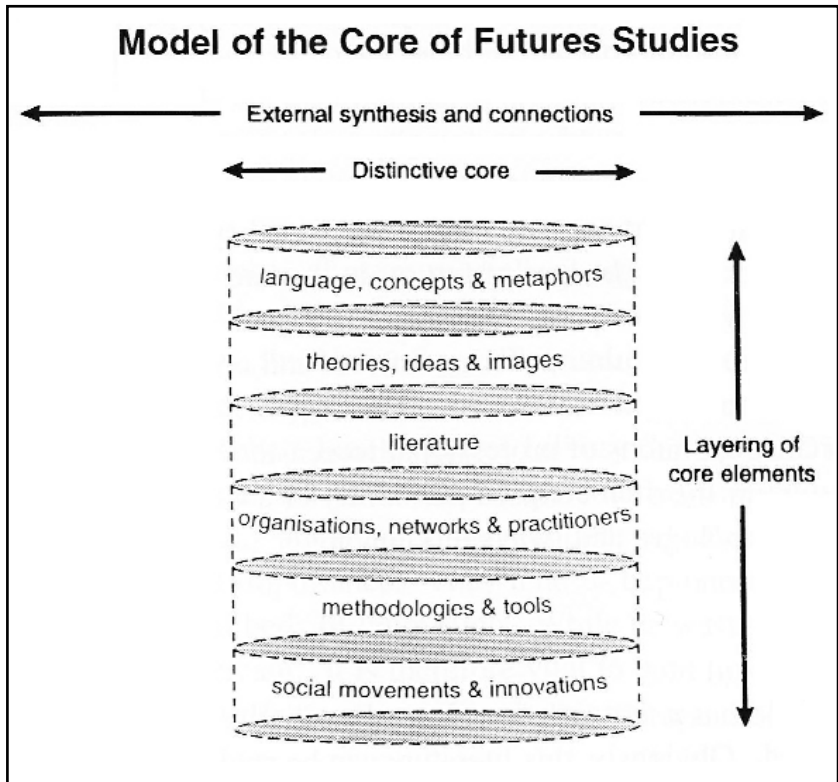
> The freeing of parts of conscious thought from the constraints of an immediate present and the increased richness of social communication allows for the anticipation of future states and for planned behaviour. With that ability come the abilities to model the world, to make explicit comparisons and to weigh outcomes; through such comparisons come the possibility of reorganising plans. Obviously, these capabilities have adaptive value.3

Human beings therefore have an innate capacity for speculation, foresight, modelling and choosing between alternatives. They are not stranded in a deterministic world. Rather, they are consciously located in a socially created but self-actualised matrix of structures, perceptions and forces. It is for such reasons that human beings are able to think not only about the future (as an abstract dimension) but plural futures (that entail alternatives and choices). Unlike the human body which is necessarily constrained by biological processes (what J T Fraser calls the creature present), the human mind, imagination and spirit are free to roam at will amongst a stunning array of different past, present and future worldviews. Few take the time to appreciate just what kind of biological miracle this really is.

Futures study as an emergent property of the human brain-mind system

Simply put, the wiring of the brain-mind system is sufficiently complex and inclusive to permit at least three kinds of journeys: first, it routinely permits consideration of past environments that individuals

were not able to experience directly; second, it creates knowledge and understanding of events that take place in the historical present but which are displaced in space (such as the awareness garnered from watching a news program); and third, it enables the forward view - a potentially panoramic outlook on a vast span of alternative futures.

It is for such reasons that figure 2 includes capacities and perceptions as two starting points for social foresight. The ability to think ahead is grounded in these two human qualities. It is an emergent capacity of the brain-mind system. This is why all persons are fundamentally capable of foresight, forward thinking and responsible behaviour focused on long-term considerations.

Developing a Social Capacity for Foresight

Accounts of children raised in deprived circumstances give weight to the view that, to become truly human, the young need to be nurtured within a caring family and inducted into the symbolic social world of language and culture. Unfortunately, those raised in Western or Westernised cultures are likely to be imbued with the characteristic Western outlook and its typical assumptions which include notions of cultural superiority, nature as a resource, growth as an unquestioned good, the primacy of science and technology, the authority of the past, and an habitual dismissal of the future.4

Critical futures study suggests that such embedded cultural understandings are actively complicit in the emergence and maintenance of the global problematique in all its many dimensions. Therefore, each generation takes on such commitments and assumptions that actually help to perpetuate an unsustainable world order. However, since higher order consciousness is reflexive, people can look at their own presuppositions and, where the evidence is clear, change them. This is not easy, but it is certainly possible over a period of time. As this process occurs, so a diagnosis emerges regarding the global plight of humankind. The resulting insights help provide motivation for the emergence of a futures discourse. As this is learned, so aspects of the futures dimension clarify further and connect back to the present.

Society is profoundly affected by a number of dominant discourses which, in no small way, condition the framing of current issues and concerns. One of the dominant discourses is economic. It is used by governments for legitimation, control, decision-making and the administration of resources. Its cornucopian assumptions presuppose a world without limits and, indeed, without a future. It essentially says: Buy, consume, use and use up everything you want, the more the better. Give no thought to tomorrow. However, this discourse is predicated on questionable assumptions that arguably provide false signals to all those who use them. For example, assumptions about GNP, growth and the efficacy of market mechanisms have been thoroughly criticised by futurists and others.5

Another discourse is academic. It is deeply conservative, heavily committed to boundary maintenance and the control of knowledge production. The fact that the discourse of history is so solidly embedded in academia, whereas the discourse of futures is not, suggests that academia values the past much more than the future.

Set against these are a number of newer emergent discourses which are at different stages in the legitimation process. For example, one could nominate a peace discourse, an environmental discourse and a feminist discourse. Each attempts to legitimise particular concerns through language. A futures discourse shares in this need to achieve acceptance and legitimation, but it is perhaps less clearly focused on achieving specific cultural goals for particular constituencies. Perhaps the most specific goals involve: (a) supporting a wholesale shift from short- to long-term thinking; and (b) exploring the nature of a transition to sustainability.6 However, beyond these goals the futures discourse does not appear to be highly prescriptive. One reason may be that the core concept of alternatives mitigates against it. Nevertheless, the lack of a futures discourse in society is one of the main factors inhibiting adaptive change. On the other hand, wider popular participation in this discourse is one of the most powerful ways of dealing with the apparently intractable dilemmas of the present and near future.

The above account, while incomplete, explains that, without a futures discourse founded on critical, in-depth thinking, paradigm analysis and cultural understanding, the future remains out of sight and therefore out of mind. The many rich possibilities for understanding and reconceptualising aspects of the global predicament, as well as developing strategies that aim towards consciously chosen outcomes, are therefore overlooked. What then can be done? Scholars have devoted time and effort to making futures concepts and ideas more widely accessible in the belief that, in so doing, the social capacity to use, apply and develop the discourse will be enhanced.7

The objection may well be raised that not all such concepts are owned by futurists. This may be so, but when such concepts are used over a sustained period and combined with other resources available within futures studies they permit a distinctly futures-oriented quality of understanding to emerge. It is this which is the primary goal and purpose of futures educators, rather than the mastery of techniques or the pursuit of particular scenarios.

Thus, futures concepts provide individuals with the foundation of a futures discourse and an applied futures perspective. It would not be possible for the latter to develop without the former. However, figure 2 suggests that futures tools and methodologies have their own critical role: they constitute the next step or layer because they increase the analytical power of futures work through their use in modelling, calculation, the manipulation of large, complex data sets and scenario construction. However, these are demanding activities that require training, experience, finance and a context of professional support. Hence, the research institute, the foundation, the university department and the successful futures consultancy are all examples of institutions of foresight (IOFs).8

Together they constitute the next level of sophistication and social capacity. They make it possible for futures projects and processes to be pursued in areas such as futures education, strategic planning and twenty-first century studies. Finally, where there are sufficient IOFs, each supporting teams of researchers, and where the work produced is of the requisite quality, the society in which they are located can move towards the attainment of a broad, social, futures capacity. In other words, social foresight can be built up layer by layer from these elements.

Part Two: Futures Concepts

Elements of a Rationale

In order for anything new to be done, there needs to be a rationale, a way of justifying what is intended, and attention focused on some of the expected outcomes. Four key points can be briefly mentioned here.

1 Decisions Have Long-term Consequences

A futures perspective involves an active view of decision-making. Each decision implies a potential branch leading away from one direction and towards another. While some decisions are trivial and become lost in the texture of larger events, others are seen to powerfully condition the present and the future. For example, the survival or extinction of entire species is now dependent upon human decisions about their habitats. Equally, decisions to deploy certain chemicals, technologies and weapons systems all affect the viability of our environment and our prospects for a livable future.

2 Future Alternatives Imply Present Choices

The power of the human mind to range at will across the vast span of past, present and future provides us with a powerful means of determining the ends we pursue. The human species is not yet locked into a mechanical process which dictates our futures. Since many different possibilities can be envisaged, there is normally consid-

erable freedom of choice. It becomes clear that, to the extent that we become aware of different future alternatives, we gain access to new choices in the present. If we become aware of something we want to avoid, we can take appropriate action. Similarly, if we can imagine something we want to create, we can set in motion the means to create it. This is as true of a relationship as it is of a new car or airport. Future alternatives imply present choices because it takes time to exert our will and mobilise the resources involved to achieve a given outcome or avoid undesirable consequences.

3 Forward Thinking is Preferable to Crisis Management

Forward thinking has become a structural necessity for societies in transition, rather than merely a matter of personal prudence or safety. It is preferable to crisis management because the latter is expensive and wasteful. Furthermore, as Chernobyl and other large-scale accidents have tragically proved, the ensuing damage may be more costly than anyone would have rationally permitted had they known the likely consequences in advance. While it is not possible to predict the future states of social systems in any detail, it is possible to take a strategic view, to explore options and alternatives, to anticipate eventualities, and to prepare for contingencies. To some extent this is already being done, but only in a very patchy and incoherent way. There is, for example, no systematic external environmental scanning capability permitting long-term contingency planning in most organisations. Forward thinking creates a decision context in which unpleasant surprises can be minimised. It means that crises can be kept to a minimum (but of course, never eliminated entirely). As the stakes mount globally, so it becomes increasingly important to invest human and material resources in all forms of forward thinking.

4 Further Transformations Are Certain to Occur

The prospective changes over the next 100 years are probably as great as those which have occurred over the last 1,000. They could include: the loss of most remaining tropical forests; major climate shifts; new person-machine interactions; significant extension of the average life expectancy; and increasingly ubiquitous computers and powerful new technologies such as genetic engineering and nanotechnology. Clearly, the fact of continuing rapid change in so many areas creates a major challenge for our species. Can we adapt? Should we adapt? How can these changes be regulated for the benefit of all? The study of futures has a role to play in posing and attempting to answer such questions.

The Futures Field

The concept of a futures field (as indeed that of a knowledge base) not only serves to frame professional debates, it is also useful in providing students and others with simple maps of the study area. There are two accounts I find most useful. The first defines three core areas of activity along a continuum: futures research, futures studies and futures movements. The second is a conceptual matrix. Both are outlined below.

Futures Research

Here the emphasis is on forecasting, planning and exploring futures using analytic and quantitative methods. This area tends to be dominated by specialists since the methods involved

A spectrum of futures work

FUTURES RESEARCH (Empirical and scientific focus)	FUTURES STUDIES (Synthesis, criticism and education)	FUTURES MOVEMENTS ('Grass roots' activities leading to change)

| HARD POLE (Restricted to professionals) | | SOFT POLE (Open to anyone) |

are sophisticated, time consuming and costly. The finance is provided by government departments, corporations and other large organisations, and the results of the work normally flow back to them. Hence, very little futures-research reaches the general public unless books are specifically written or digests of research results are produced specifically for a wider audience.
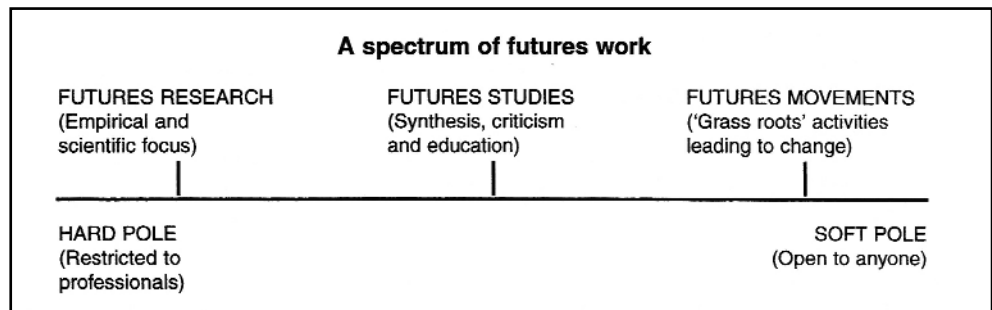
Futures Studies

I locate futures studies mid-way on the spectrum of futures work. This is where teachers, critics, writers and academics can be found. They normally try to balance specialised work with the more informal approaches outlined below. This area is therefore concerned with understanding the futures field as a whole, developing overviews of its work and communicating these to, and with, other constituencies and groups. Futures studies has direct input into policy and planning in many other fields.
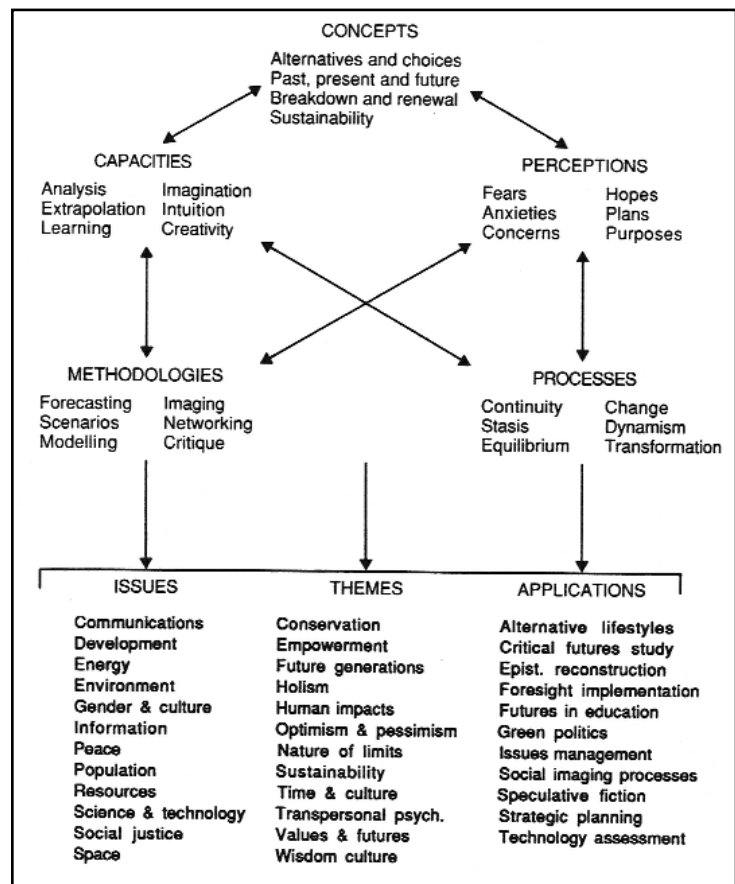
Futures Movements

Many of those involved in such movements would not consider themselves futurists at all, yet their activities impact very strongly both upon the goals of the futures field as a whole and upon the society in which they pursue their research. Groups within the womens, peace and environmental movements, as well as many non-governmental organisations (NGOs), have become associated with futures work because they tend to promote broadly congruent ends. The most successful of these movements are among the main agents of social change. They place new items on the social agenda and create support for social innovations.

Another way to consider the futures field is to view it as a forward-looking matrix as shown in figure 4. As noted, futures work draws on a range of specific human capacities and perceptions. Futures concepts and methodologies are then applied in order to study processes of continuity and change. It is often overlooked that the study of processes lends futures work a valuable empirical dimension. This is one aspect of the field which makes it a good deal less arcane and naively speculative than has been sometimes suggested. The scope and nature of futures work make it necessary to process a lot of information, so those working in the field tend to research widely, often using the results of more detailed work carried out by specialists in other areas.

Futures work has diverse roots, although its branches are explicit and clearly identifiable. Dominant issues include development, environment, peace, science and technology, while futures themes often focus on the rights of future generations, the nature of limits, sustainability and values.

Futures Study as a Forward Looking Matrix

Applications cover the implementation of foresight, futures in education, strategic planning and technology assessment, amongst others. Imaging, networking and critique are perhaps at least as important as the more common focus on forecasting, scenarios and modelling. Futures concepts give expression to a range of human capacities such as foresight and envisioning. Conventional concepts, capacities and perceptions would not, on their own, be sufficient to allow futures enquiry to take place - except at a very superficial level. Methodologies are needed to increase the analytic and applied power of futures work, and to make it more systematic. The interaction of concepts and capacities helps to stimulate new perceptions about futures. These perceptions shape the progress of futures work. The issues, themes and

CONCEPTS
Alternatives and choices
Past, present and future
Breakdown and renewal
Sustainability

CAPACITIES
Analysis   Imagination
Extrapolation Intuition
Learning   Creativity

PERCEPTIONS
Fears   Hopes
Anxieties   Plans
Concerns   Purposes

METHODOLOGIES
Forecasting Imaging
Scenarios   Networking
Modelling   Critique

PROCESSES
Continuity   Change
Stasis   Dynamism
Equilibrium Transformation

ISSUES
Communications
Development
Energy
Environment
Gender & culture
Information
Peace
Population
Resources
Science & technology
Social justice
Space

THEMES
Conservation
Empowerment
Future generations
Holism
Human impacts
Optimism & pessimism
Nature of limits
Sustainability
Time & culture
Transpersonal psych.
Values & futures
Wisdom culture

APPLICATIONS
Alternative lifestyles
Critical futures study
Epist. reconstruction
Foresight implementation
Futures in education
Green politics
Issues management
Social imaging processes
Speculative fiction
Strategic planning
Technology assessment

applications within the field are among the major shaping forces of modern culture. All the key drivers of social change interact with these concerns at one or more points. This means that futures studies offers access to some of the key shaping ideas and processes of the age.

A Structural Overview of the Early 21st Century

It is clear from the above that knowledge about the future is problematic, but this does not mean that the future is a blank space or vacuum. On the contrary, a clear view of aspects of the past and present, coupled with a range of futures concepts and methods, means that we can better understand many of the forces that will shape the next twenty years and, indeed, the next century. We cannot know what will be in a hard, empirical sense, however a coherent structural analysis based on skilled interpretation is achievable and useful. The key questions that need to be investigated by futures workers include:

What are the main continuities?
What are the major trends?
What are the most important change processes?
What are the most serious problems?
What are the new factors in the pipeline?
What are the main sources of inspiration and hope?

I have suggested that future events cannot be predicted because prediction in relation to social systems is an impossibility, but there are ways of reading the global horizon that enable us to create a coherent view of the terrain ahead. Futures workers already know a great deal about continuities in areas such as language, culture, tradition, the environment and so on. Equally, we know a great deal about trends and processes of change. As noted, futures researchers listen very carefully to those who study trends in other fields. This knowledge can then be used to constantly update our understanding of broader trends that may be latent now, but could soon challenge a region, a country, a hemisphere, or humanity as a whole. We can review the nature of global systemic problems and outline many new factors and forces that will come into play. However, as the poet William Blake knew so well, reason alone leads to despair, so it is also necessary to move beyond purely rationalistic methods and to identify sources of inspiration and hope. The careful use of this framework provides an evolving view of the changing global system. Using all the tools and capacities available, it is well within our grasp and capacity to outline the context of the near-term future without predicting every twist and turn of the journey.

The map of the future is a metaphor that describes what the futures field as whole aims to achieve. Essentially, it attempts to provide policy-makers and others with views, images and alternatives about futures in order to inform decisions in the present. It is important to note that the underlying purpose of futures studies is not to make predictions, but rather to gain an overview of the present human context in order to illuminate alternative futures. Hence, the futures-scanning loop always returns to the present in the form of choices, actions, policies and the like. This map is never complete but is continually up-dated as events, new information and data feed new insights. The description of a particular future context is not simply a forecasting or predictive enterprise; rather, it is an interpretative process comprised of stages that include environmental scanning, detection of signals, interpretation, decision-making, evaluation and implementation. However, the future is not merely the province of planners and academics: it concerns everyone.

Prediction, Forecasting and Foresight

To many people the term futures appears to be synonymous with prediction. Similarly, the now-dated term futurology carries an even stronger predictive connotation. What then, are the differences between prediction, forecasting and foresight?

A prediction is a confident statement about a future state of affairs. In a weak sense, predictions are ubiquitous

in everyday life. However, useful predictions are best confined to systems that can be fully measured and understood (eg. the fuel needed for a plane of given size carrying a payload over a given distance). Informal predictions can be made about almost anything, but when it comes to complex social systems and non-material phenomena (such as rules, emotions or values) they cannot be relied upon.

Forecasts are based on conditional hypotheses that are grounded in the careful analysis of past experience. If initial conditions hold, and current trends run true to form, then a particular outcome can be expected with a certain level of confidence. This kind of reasoning must be based on a thorough understanding of the system or systems involved. The past performance of a system provides a rational basis for judging possible future states. The methodologies involved in making forecasts are in wide use in government, business and industry.

> Foresight is the ability to create and maintain viable forward views and to use these in organisationally useful ways.

Foresight is, first and foremost, a human capacity. It is used in many ways to protect the organism from harm and to guide it on a moment-to-moment, hour-to-hour and day-to-day basis. People exercise foresight when they take a raincoat or an umbrella (even though the sun is shining), make an appointment or put money aside for a new car. Foresight is one of the basic skills that protect us from making certain kinds of errors and suffering the consequences. This theme is explored in more detail below.

Past, Present and Future

The English language makes very clear distinctions between the past, present and future. For example, the past carries connotations related to history, experience, memory, identity and personal achievement. The present refers to the here and now, the fleeting moment, the instant of awareness. The future involves our hopes, fears, plans, projects, goals and intentions.

Interaction of past, present & future
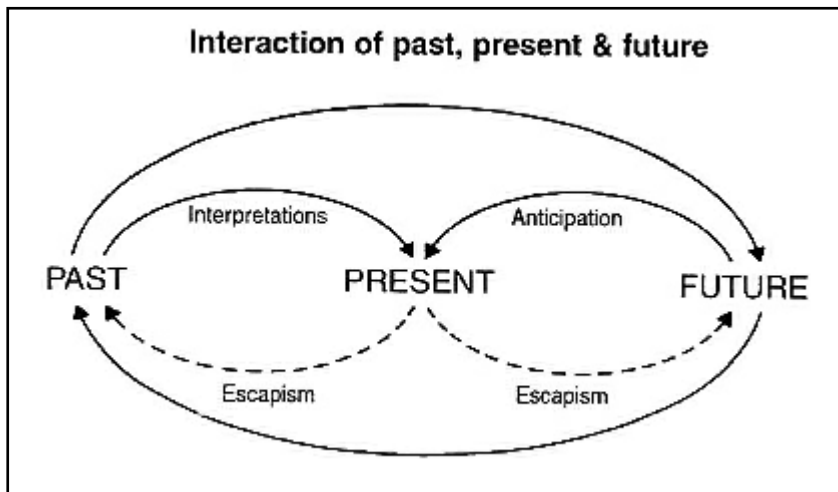
There are two processes that are centrally involved in constructing the present: one is the interpretation of past experience; the other is the anticipation of possible futures. The two processes are not in opposition. One cannot be considered more or less important than the other. They are mutually reinforcing as both are necessary to support normal consciousness. However, the attempt to remain in the imagined past or future for any length of time risks being escapist because it fails to reconnect with the present.

The distinctions between the past, present and future are important, however they are not dependent upon the tenses being so rigidly separated. In fact, these three notions of time are richly interconnected. To put it briefly, our history, identity and achievements in the past affect our perception, understanding and focus in the present which, in turn, influences our plans, projects and future goals. These connections are even richer since the flow between them is multidirectional. For example, hopes or fears about futures may not just affect the present, they may also cause one to reconsider aspects of past experience. Similarly, decisions that one may make do not spring fully formed from the present. They arise from the historical and cultural matrix in which we exist. Hence, the boundaries between past, present and future are, in fact, fluid and open. This means that instead of

being stranded in a narrow and restricted present, there are other creative and cultural choices available. Everyday living requires a fluid and easy movement between past, present and future. Only brain damaged people with impaired memories lack this capacity. They are locked into a moving present which they can neither remember nor foresee.

Extending the Present

A useful starting point is the question: How long is the present - a moment, a minute, an hour, a day? Again, there are processes which may extend over millennia. For example, plutonium is a lethal man-made substance with a half-life of about 250 000 years. In this respect, our culture is already in the future! On the one hand there is a kind of default notion of the present as a fleeting moment, the here and now, while on the other, a quarter of a million years may be appropriate.

For the purpose of obtaining a grasp of our own context in time, our own particular span of history, we require a notion of the present which recognises that we are: first, rooted in the past; second, responsible for creating our near-term futures; and third, responsible for protecting future generations. In other words, by virtue of our deep connections both with the past and the future, we have a tangible need for an extended present. Elise Boulding has suggested the notion of a 200 year present - one that stretches some 100 years back and 100 years forward. This time period has an organic quality because we are richly connected to it through customs, institutions, values and, not least, through our families.9

The Extended Present - a Family Chain

Figure 6 depicts a chain of family relationships. The links in this chain are the people who have lived before us and those who will live after. Some of the people in our past can be consulted directly through their possessions or through the historical experience of their generation. The people of our future can be considered by anticipating future conditions, by imaginatively constructing images and futures projects and by extending forward the boundaries of the social community to which we belong.
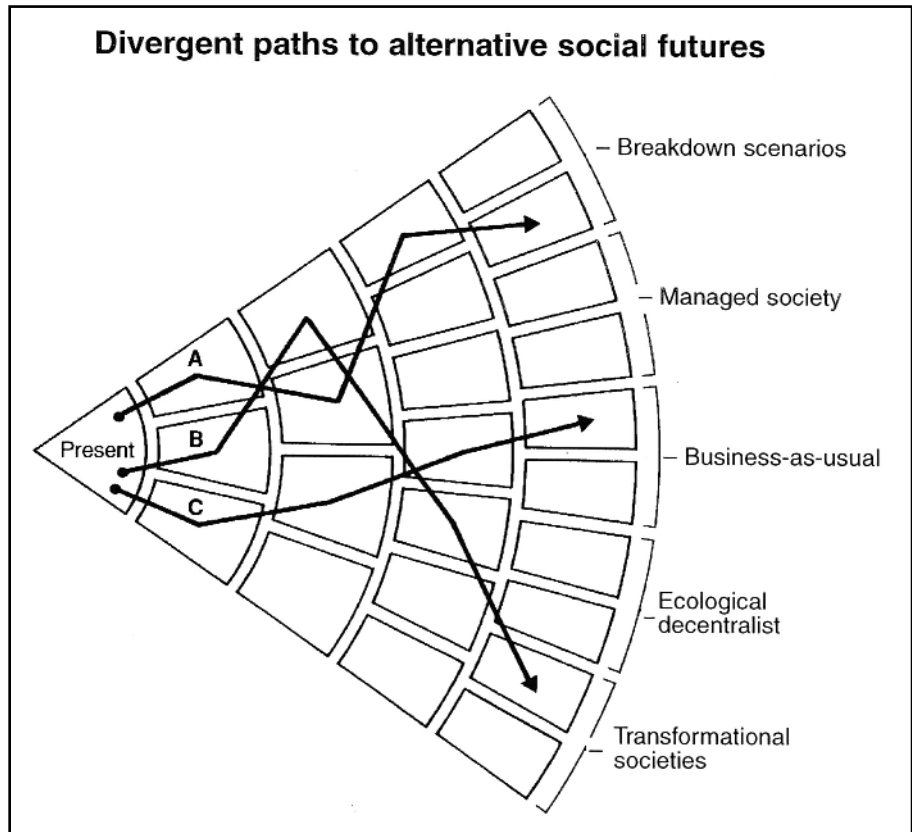

The extended present - a family chain
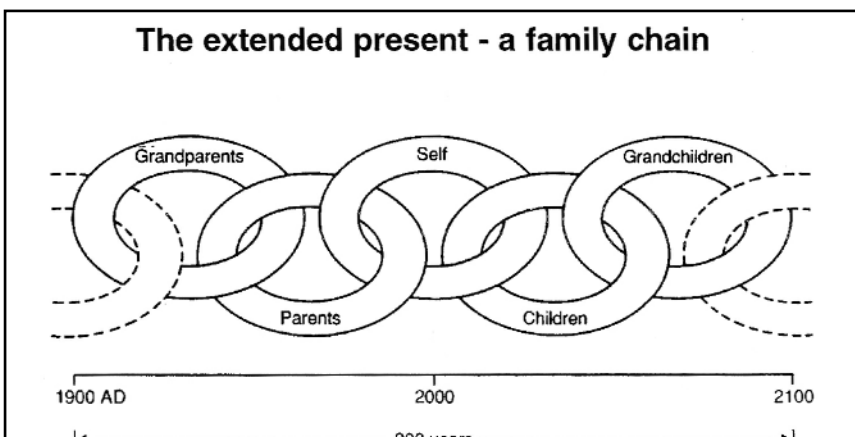
If the notion of an extended present were taken up and used more widely, or if it were adopted as a standard operating assumption, it could change the way people think about the world and the way they make decisions. For example, many long-term problems arise because people discount the future. Short-term thinking only considers the immediate effects of actions and decisions. The longer-term implications are therefore minimised or ignored.

Alternatives and Choices

The major reason for studying futures is to understand alternatives and the choices they pose. Alternatives and choices are widely considered to be core concepts of the field. Alternatives refers to the field of possible scenarios or lines of development. Choices refers to the process of selecting from a given field. When we have decided upon or are compelled to follow a particular course of action it is simply too late to consider other alternatives. Many choices tend to be time critical: that is, they need to be made before events occur which close them off.

For example, it would be no use implementing wildlife conservation policies after most species had died out.

Choosing from alternatives can be compared to using a road map to decide which route to take to a particular destination. The driving metaphor is useful in that it suggests that the view ahead may be more important than the view back. In general, the more time and effort invested in conceptualising alternatives, the richer are the available choices. Scenarios can be used for this purpose. They are not in any sense predictions, but contrasting pictures that provide a framework for considering a range of alternative futures. Here are five examples

The Breakdown Scenario

This explores a future in which

Divergent paths to alternative social futures

– Breakdown scenarios

– Managed society

A

Present   B

– Business-as-usual

C

Ecological decentralist

Transformational societies

something important went wrong. Possible causes or triggers may include: accelerated salination or desertification; nuclear accident(s) or conflicts; ecocide (the destruction of whole forests, biological productivity in the sea, etc.); a chronic rise in social conflict, crime and morbidity; or the depletion of essential resources. The depressing nature of breakdown scenarios is one reason why they are seldom considered by governments or other quasi-official bodies, yet such scenarios are clearly possible and provide ways to consider inherent weaknesses or warn of future dangers.

Repressive or Totalitarian Societies

These have dominated our collective past and are still common in the present. Despite the decline of state socialism, they could be part of our future too. Possible factors include: adoption of a militaristic ideology (war is peace, and so on); the rise of right-wing ecological governments; the use of information systems for invasive or repressive purposes; scarcity used as a tool of control; or overpopulation. Fascist futures are permanently possible so long as the values, interests, tools of oppression and social systems that give rise to them exist. Hence, scenarios of this kind should be kept firmly in mind, and precautions should be taken to guard against their realisation.

The Business as usual Scenario

The business as usual scenario is an interesting case which represents the implicit expectation of much official literature and thinking (if those are the right words) on futures. The weaknesses of this type of scenario are that it ignores problems such as: increased inequalities within and between nations; growing dilemmas in the areas of energy and ecology; the steady growth of resource constraints in some areas; the further development of entertainment industries based on reality-avoidance; and a downward spiral into irresolvable crisis. This characterisation of business as usual futures assumes that there are real and unavoidable problems that such a scenario cannot solve. If this is in fact the case, then futures of this kind either become breakdown scenarios or bridges to

some kind of breakthrough. Either way, this option is unsustainable. This interpretation stands in direct contrast to conventional assumptions which take a more sanguine view of the present.

The Ecological Decentralist Scenario

In this scenario humans are subordinated to nature or seen as part of it; benign, decentralised soft energy paths are developed and applied; real limits to growth are recognised and implemented; a stewardship ethic becomes established, and with it a deep commitment to ecological reconstruction. Such a scenario is certainly an option, but it would represent a substantial change of direction for a civilisation which has adopted a strong and aggressive ideology of economic growth.

Transformational Societies

Transformational societies are more difficult to characterise because they could develop through many distinct routes. This kind of scenario may arise due to some new stage of human development, or through the benign operation of a new form of technology. Possible consequences might include: an acceleration of human development into new areas; the transcendence or dissolution of conventional problems; the development of subtle and sophisticated person-machine interactions; new approaches to physical health, psychic clarity or conflict resolution; and the subordination of economics to higher ethical imperatives. Though somewhat improbable at first sight, such scenarios probably hold out the greatest hope for real human progress and cultural development. While it would be a mistake to think that any of them could be quickly achieved, these futures are of immediate interest and value because they provide clear contrasts to the dominant, implicitly technocratic, view of futures.

Each of these five contrasting groups of scenarios has roots in our present-day world, and may yet emerge from it. They are all possible, but not all of them are desirable. Taken together, they provide the beginnings of a framework for making choices and designing policies.

Attitudes to Futures

When the question of attitudes arises, there is a tendency to think in terms of two polar opposites: optimism and pessimism. There is some value in this. However, optimism and pessimism are too simple to be applied uncritically to futures problems. The fact is that both terms are ambiguous. An optimistic person may believe that there is no cause for alarm, when in fact there may be very good cause for it. Similarly, a pessimistic person may become so concerned about a particular problem that he will get up and do something about it. So the important thing is not a persons initial disposition but what (if anything) then ensues. The key to dealing with issues, concerns and fears about futures lies in dealing with the human response. I call this the empowerment principle. A simple matrix can be used to explore a variety of responses to whatever may be feared (see figure 8). This matrix has two main purposes: first, to place negative associations in a wider context; and second, to focus attention upon so-called high quality responses.

Matrix for Dealing with Fears

This approach can be used very successfully in a workshop situation, as a counselling tool or by individuals working alone. Whatever the method, it is often helpful to begin by exploring the participants fears or concerns, while recognising that these fears usually have a sound basis in reality. In all but a small minority of cases they are likely to be rational responses to an ecologically compromised world. The next step is to ask the participants to examine the images, associations, feelings or responses generated by the group in a non-judgemental way.

This matrix is structured around acceptance and rejection of low quality and high quality responses. There is a wide range of high quality responses to choose from. Such responses are based upon the notion that many fears are overstated. Fears that are linked to images of futures are both provisional and negotiable. These kinds of

responses represent opportunities for engagement, choice and purposeful action. Finally, a high quality response is, above all, creative. It has the capacity to go beyond the given and break new ground. On the other hand, low quality responses may be dismissive, cynical or disempowering.

Four sets of responses can be developed by applying the matrix. The first is derived from accepting the view that what is feared will come to pass. Low quality responses are then explored. The second is based on validating the fear but then exploring high quality responses. The third response rejects feared futures with low quality responses. Finally, the fourth response rejects these same futures with high quality responses. While ambiguities may appear regarding acceptance and rejection, the group should not spend too much time on this point. This exercise produces up to four sets of strategies which can then be compared. Generally, solutions preferred by the majority of participants will tend to arise. Their concerns about the future depend upon the quality of their vision, perception and understanding. As such, the locus of power lies in people and not in a disembodied vision beyond human influence. If so, then a further question arises: What resources, changes, commitments and/or support would be needed to put these preferred strategies into practice?

Matrix for responding to fears

Images of futures

	Low quality responses	High quality responses
Acceptance of negative images		
Rejection of negative images		

Sustainability

If there is a single concept which challenges existing economic practice, and especially the notion of unrestrained economic growth, it is sustainability. In simple terms, for something to be sustainable it must be able to be used indefinitely without causing excessive damage to the resource being used or the environment. A special issue of Futures has explored this notion in some depth.10 Sustainability makes immediate sense when applied to renewable resources such as fisheries or crops. Both can be harvested continuously because they are to some extent self-renewing. However, beyond critical limits, over-use can occur which may imperil the resource as a whole. This is clearly the case when oceans are over-fished and when soils are depleted by short-term exploitation. In contrast, a non-renewable resource such as petroleum cannot, by definition, be managed in a sustainable way. All that can be done is to reduce the rate of depletion, expand the resource by exploiting lower-grade sources, or finding substitutes.

Sustainability challenges both economic orthodoxy and standard business as usual thinking. In effect, it calls the bluff of those who have forgotten that the Earth (in terms of its capacity to provide resources and absorb waste) is finite. It opposes the view that the Earth, with its rich ecology, its vast array of flora and fauna, is simply there to be used. Nevertheless, this utilitarian outlook is an integral part of the Western industrial worldview. The underlying assumptions of this worldview include the idea that: people and nature are separate; people have intrinsic rights to utilise nature for their own purposes; and such use is not subject to any over riding limitations. Although these assumptions are no longer valid, they still remain conventional wisdom within industrialised cultures.

Other cultures have conceived of the relationship between humankind and the biosphere quite differently. Some perceive humans as one with nature. They assume that both have shared qualities which make utilitarian views and long-term exploitation literally unthinkable. So by asking Is this activity sustainable?, we are uncovering some underlying issues that were obscured during earlier times when the Earth seemed limitless and invulnerable. However, we should not imagine that a particular blueprint for sustainability exists. Rather, the progression towards this goal will be a developmental process of social learning and innovation at every level.

Creativity and Futures

When people begin to think about some of the major problems facing the world, they often ask: What can I do? The usual implication is that their ability to affect wider events is strictly limited. The futures field provides us with a context in which such questions may be examined. In some ways, futures studies can be said to exist largely in order to answer such questions.

The point here is that each individual has access both to the wider culture and to the more specialised resources available within futures studies. Hence, the What can I do? question may be answered by: addressing fears and exploring high quality images of futures; building up knowledge and understanding of the global outlook; developing personal confidence; exploring issues and contexts using futures tools; approaching problems and issues creatively; and identifying projects and proposals for constructive change. In such ways, individuals may begin to apply creativity to futures issues. If we explore the notion of creativity in a little more detail, we will see that the options are unlimited.

How do artists, writers or architects go about creating new works? There is probably no single answer. Creative people are not necessarily intrinsically more creative than others, however, they may be better at utilising their creativity: ie. when an idea appears they are more likely to notice it, to record it and to apply it, hence the aphorism: Fortune favours the prepared mind. What typically happens is that a new idea surfaces from the subconscious or personal experience. It may only be the germ of an idea, a hint of a melody, a faint impression. The next stage is crucial: time is spent working with the idea, testing it, sketching out alternatives. If one or more of these early sketches shows potential then the chances are that it will be developed. Finally, perhaps after many months, the final work will appear. What has this to do with creating futures?

Basically, the process is the same. In scanning the global environment one becomes aware of many problems and dangers, but solutions are not always obvious. Time is then needed to inform oneself about a particular subject - say a new technology or a threat to the environment. From such broad concerns, a progressive focusing down upon a specific problem or issue ensues. This preparatory phase leads on to the creative one. It may be that solutions are obvious and emerge as one proceeds, or it may be that inspiration strikes unbidden. In either case, the important thing is to concentrate on possible solutions. It is the act of choosing and focusing that is important because what we focus upon grows! Applying creativity to futures, therefore, is a process made up of at least three elements: first, understanding the context and the problems that have arisen; second, knowing how to respond creatively; and third, tailoring the response to suit desirable alternatives.

Creating futures essentially means acting creatively. Creativity can be taught and learned. It is not mysterious. It works best in a futures context when a persons inner purpose, direction or vocation is: aligned with a clear external need; augmented by futures-related concepts, skills and methods; and supported by an effective organisation or network. When these elements are properly combined and working together, people no longer feel helpless. Having replicated the layers of capability as outlined in figure 1, they feel, and are, powerful. However, it should be noted that creativity and innovation will necessarily face resistance, so when a project or proposal is under development, innovators should expect to face opposition.

The Metaproblem, or the Roots of the Global Problematique

Some futures concepts are a little more demanding, but repay the effort many times over. One such concept is the so-called metaproblem or global problematique. A critical futures framework makes it possible to stop considering world problems as if they were somehow separate from the systems of human values and concepts that created them in the first place. Instead, we can focus on the underlying breakdowns of meaning that have occurred (and are occurring) within all cultures affected by industrialised epistemologies and assumptions. Focusing on this breakdown could be misconstrued if it were seen to be merely an attack on existing social or economic structures. However, this is not the case. Examining the status quo is a necessary stage of diagnosis. Discovering what has gone wrong constitutes a necessary first step in the process of cultural innovation.

We are concerned here with constitutive understandings that have shaped popular views of the world at a very basic and powerful level; understandings that have been expressed through (and embodied in) our social, economic, political and technological systems. The consequences are already evident in our past and present. Others have already been displaced into the future and represent challenges we have created, but which future generations will have to grapple with. Without some assessment of received wisdom, it is all too easy to accept conventional assumptions which later turn out to be disastrous.

The Dominance of Instrumental Rationality

Instrumental rationality (IR) is a powerful cognitive system that matches means to assumed or explicit ends. It permits the construction of machines of enormous power such as computers, rockets, body-scanners and automobiles. The physical infrastructure of our civilisation is dependent upon these technological marvels, so the point is not to eliminate IR, for we could no longer survive without it.

The problem is that IR encourages a defective way of viewing the world. For example, it contains no notion of limits. Another defect is that the world is seen exclusively as either a machine or as a mound of inert resources. Since IR is a system which only addresses the physical layer of the world, it cannot supply useful insights about ethics, meanings or purposes. Hence, unless IR is limited by some higher principle, its application can become dangerously over extended. Many would now argue that is exactly what has happened to Western culture. In short, IR is a recipe for disaster.

Reductionism and the Loss of the Transcendent

Reductionism is the tendency to provide ostensibly comprehensive explanations of complex phenomena merely by describing and analysing their parts. The standard reductionists logic says that if something cannot be measured, it is either unimportant or does not exist. Economics has fallen into just this trap; for example, housework is literally regarded as worthless. Similarly, global markets operate wholly on the basis of past experience. They are crude mechanisms that use signals derived from the past and the present to govern their current operations. As such, they effectively make the future vanish. They reduce temporality to a narrow band of self-interest in the here and now. This is ethical and ontological nonsense.

Reductionism is endemic to industrialised cultures. Hence, ecosystems are perceived as mere service providers. People are simply consumers or human resources. Religion is either useless or mere therapy. The possibility that there could be spiritual or transcendent realities of a completely different order is simply overlooked. As far as IR is concerned, ethics, spirituality and futures are less real than ghosts.

Science and Technology for Irrational Ends

It was Lewis Mumford who once said of modern weapons systems that the means were rational, but the ends were entirely mad. Like many others, he saw that, once certain technical means are powerful enough, they

become ends in their own right. This can be seen with modern technologies that have developed very rapidly not out of some clearly defined need or purpose, but from the compulsive dynamism associated with capitalist competition.

The present period has widely been called the information age, though this is dubious. Information per se is not necessarily valuable, nor is it to be confused with knowledge or wisdom. The dynamics of expanding information systems tend towards ends which are largely unpredictable. In this process, means and ends become confused amid the proliferating surrogate worlds of the electronic media. Similar criticisms can be made of nanotechnology (see below). Here the threat of competition is used to stimulate technical development, but again, the ends are problematic. If successful, nanotechnology could well undermine the physical integrity of our world. The key point is this: when powerful technologies are linked with inadequate worldviews or with primitive human impulses, they become irredeemably subversive. If science and technology are to help us move towards humane futures, they will need to be reconstructed on a different, non-instrumental basis. Hence, if there is a way out of the global problematique, it will clearly not be via science and technology as they are presently constituted. Perhaps the only lasting solutions will come from the re-establishment of truly human ends that are expressions of the highest human motives and capacities.

The De-Sacralisation of Nature

In most traditional cultures there are strong injunctions to protect nature from over-exploitation. Such injunctions draw their power from belief systems which endow the environment, and all that lives within it. Many of these animate or inanimate entities are sacred: ie. they occupy a higher ontological level than that of mere utility. These entities are not seen as simply resources: they may be worshipped, consulted or propitiated. They become the sources of human culture, while at the same time remaining the substance of lived experience.

However, Western cultures have developed according to the very different outlook created by Bacon and Descartes. The former discovered the scientific method (by which nature could be manipulated in order to yield her secrets); while the latter asserted a duality between people and the world. Newton subsequently characterised the world as a machine (even though he himself did not fully believe it). The result was a culture which felt itself to be both separate from nature and superior to it. In this context, the Christian injunction to subdue the Earth could be completed, but at a heavy price. It is evident that other traditional cultures which treated nature as in some sense holy, or at least possessing intrinsic value, retained access to a much richer symbolic world while also protecting their own long-term wellbeing. For Western civilisation, however, the de-sacralisation of nature has meant that the world and its creatures are no longer revered or protected. The results are now obvious.

Cultural Editing

Back in 1935, Ruth Benedict published a book called *Patterns of Culture* which stated that no man looks at the world through pristine eyes. He sees it edited by a definite set of customs and institutions and ways of knowing.11 This is a key insight, for there is good reason to believe that the cultural editing which has taken place within the Western industrial worldview has had a number of powerful consequences. We have come to view the world in certain ways and these dictate how we utilise it. But many of these ways are not viable in the longer term. If we want to create a sustainable culture, then we will have to find ways to reprogram some of these cultural editing processes.

Current global problems suggest that we need to reconstruct our worldview - to change the ways we construe the world. This is certainly an historically unprecedented challenge. We simply do not know enough about how these processes work. Nevertheless, redundant assumptions can be identified and even replaced. They may include: the dominance of instrumental rationality; the misrepresentation of nature as merely a resource; the need for a renewed sense of limits; the rediscovery of the sacred; and the need to assert human control over technological means and ends. Against these we may cite other components which could play a role within in a

renewed worldview. For example, these may include: a sense of temporal process embracing the past, present and future; a global and systemic view; a recovery of participating consciousness; the further development of reflexive awareness; and a commitment to higher-order human development.12

The kind of cultural editing that has occurred within Western cultures has either ignored or misrepresented the higher levels of a qualitatively differentiated world. It has made them appear mysterious or esoteric, more within the realm of gurus, mystics or charlatans. In fact, they are part of a hierarchy of being, which gives rise to emergent qualities at increasingly complex levels of organisation. Just as the components of a watch acting together give rise to the ability to measure time and the rich life of organisms transcends the operation of individual cells, so the more highly evolved manifestations of human consciousness are able to reach transpersonal levels. Accounts of transcendent awareness strongly suggest that higher levels of human consciousness tend to be inclusive rather than exclusive. They reach out to broader spans of space and time and have therefore become essential to the task of healing the planet, creating peace and moving towards new stages of civilised life.

Transcendent knowing occupies the highest level of human consciousness not because it is better but because it is more highly differentiated. It does not involve a rejection of empiricism or rationality but rather an understanding of where their appropriateness lies. In denying this scheme of vertical differentiation, Western culture has cut itself off from some of the most potent sources of value and meaning. One result is that problems such as those created by power, ownership and conflicting interests appear to be irresolvable. They are irresolvable in these terms, however lasting solutions can rapidly appear in a vertical movement towards a higher level of understanding which transcends and resolves lower-level contradictions.
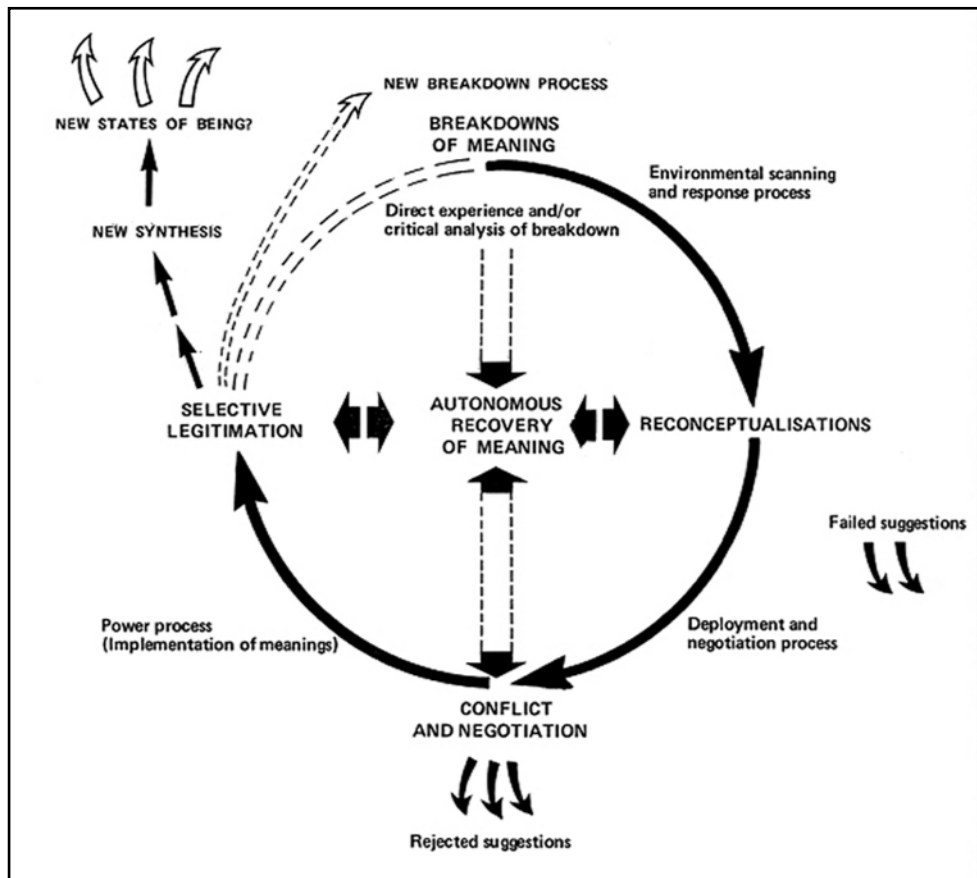
Its not clear to what extent a culture can consciously change its own social editing processes. However, looking back at successful examples of systemic change (such as have been to some extent achieved by the environmental and womens movements) there is sufficient evidence to justify optimism. Change is possible when the time is right and the ideas involved are compelling enough to win wide support. This does not mean that all problems can be solved. Many will only be resolved when their deeper dimensions are more fully understood. Yet even now a way ahead can be seen.

Renegotiating Meanings

The notion that words simply mean what they say and that texts faithfully reflect a coherent experience or account of the world is a deeply held and comforting one. It is comforting because it preserves the simple view of language and meaning as providing us with a universally apprehensible and objectively verifiable 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 leaving individuals open to mystification and exploitation. Insufficient latitude is given to permit the full flowering of human communicative ability and expressiveness. In order to even notice ideological and linguistic traps (let alone escape them) it is essential to give up some degree of intellectual comfort and certainty. In so doing, what is lost in narrowness and naivety can be gained in the freedom to speak ones own word.

Traditional literary criticism concentrated on understanding tone and classifying the authors style according to a system of criteria. Today, the writer occupies a less privileged position: texts have been said to provide an open framework for the construction of meanings. While this view may be overstated, the reader has become much less a passive observer and more an active participant in the communication process. The reader is fully capable of deciding upon meaning, purpose and intention 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 indeed to leap beyond them. This is a very important point - knowledge is never finished, therefore meanings are always fluid and negotiable. The ramifications of this view are of great significance for people facing up to the apparent inevitability of technological development.

In presuming a more equal status between author and reader, an important principle can be established which also applies to other forms of communication such as advertisements, editorials, newscasts, political speeches and futures projects. The concept of text can be utilised as a metaphor and applied to cultures and traditions. Contrary to received wisdom, our present movement beyond the industrial way of life is not fundamentally a matter of economic and technological change. It seems to me that by understanding the present cultural transition, not so much in terms of the external regulation or control of techniques and technologies, but as a transformative process involving breakdowns and renewals of meaning, we will be able to discern the core of our major concerns about long-term survival and wellbeing.

NEW STATES OF BEING?

NEW BREAKDOWN PROCESS

BREAKDOWNS OF MEANING

Environmental scanning and response process

NEW SYNTHESIS

Direct experience and/or critical analysis of breakdown

SELECTIVE LEGITIMATION

AUTONOMOUS RECOVERY OF MEANING

RECONCEPTUALISATIONS

Failed suggestions

Power process (Implementation of meanings)

Deployment and negotiation process

CONFLICT AND NEGOTIATION

Rejected suggestions

From a critical futures point of view these concerns are perennial. They relate to the essentially human process of constructing meaning, purpose and value. Therefore, if individuals are free to reinterpret texts, then they are also free to reinterpret inherited traditions and normative views of desirable futures. If there can be no final or authoritative reading of history or futures, it follows that in principle each person has the same potential right of access to the crucial decision-making arenas of the day. Those who so choose can, therefore, without regard for social status or academic qualifications, participate in cultural reconstruction and renewal at a very fundamental level.

The Foresight Principle

The principle of foresight is clearly one of the main keys to a livable future, but it is not yet well understood or widely applied. As noted above, people cannot know the future in any precise sense. Yet at the same time they necessarily look ahead - both to prepare for contingencies and to assess the likely results of their actions. Prudence and responsibility both emerge from forward thinking. It is prudent to make provision for seasonal change, for self-defence, for climatic change and many other possible contingencies. It is responsible to consider the wider, long-term consequences of our actions and decisions.

Everyone applies the foresight principle in their daily lives, usually without being aware of it. Foresight is part of our standard mental equipment: its usefulness is unquestioned, but foresight at the social level remains rare. Why is this? As noted above, the Western worldview embodies a set of assumptions and presuppositions that condition our view of the world. Among many other things, they tell us that: the past is authoritative and real; the short-term present is all that matters; and futures can be safely ignored. This worldview actively discourages

17

any social investment in foresight even though, at a more individual level, we know it to be essential. Discounting the future can therefore be seen as one of the perceptual defects carried over from the scientific and industrial revolutions.

Institutions of Foresight

The lack of social foresight means that late industrial societies are plunging blindly toward a most challenging and unstable period without the tools of understanding, the insight or the institutional capacity to make effective, long-term, strategic decisions. We require social foresight in order to carry out a number of vitally important tasks such as scanning, warning, determining priorities, educating decision-makers, informing the public and so on. Such tasks are too important to be left to chance. They should be undertaken systematically with wide social, cultural and political support. Social foresight can be likened to the headlights on a car, the radar in a plane or the skilled judgement of a ships pilot. It is needed in order to develop sophisticated and useful views of the global context over the coming decades. It is imperative to bring out as much structural detail as possible on the hazy map of the near-term future. It is only by so doing that we can begin to see clearly enough to steer away from disaster towards a more viable way of life. It is this growth of human understanding and the extension of our perception beyond the present that extends the human community beyond the here and now to our future selves, to our descendants and even to other species. In modern times, foresight is less a choice than a necessity with all the force of an historical imperative. A simple continuation of business as usual attitudes and practices will inexorably lead to futures no sane person would wish to inhabit.

In recent years there have been a number of concerted attempts to implement foresight activities of one sort or another. These efforts have been both government sponsored and private, and have taken the form of distinct institutions, voluntary networks, associations or councils. Examples include: the Congressional Clearing House on the Future (Washington DC); the Global Network on Responsibilities to Future Generations (University of Malta); the Future Generations Alliance Foundation (Kyoto, Japan); the Institute for Social Inventions (London, UK); the International Futures Library (Salzburg, Austria); and the Australian Commission for the Future (Melbourne, Australia). Broadly speaking, such organisations pursue some or all of the following tasks:

1 Raising issues of common concern that may be overlooked in the conventional short-term view, for example, peace, environmental stability, inter-generational ethics, as well as the social implications of new technologies.

2 Highlighting dangers, alternatives and choices that need to be considered before they become urgent.

3 Publicising the emerging picture of the medium-term future in order to involve the public in the decision-making process.

4 Contributing to the body of knowledge related to foresight and the macro-processes of continuity and change that frame the future.

5 Identifying the dynamics and policy implications of the transition to a sustainable world and placing them on the global political agenda.

6 Facilitating the development of social innovations.

7 Helping people to become genuinely empowered to participate in creating the future.

8 Helping organisations to evolve in response to the changing global outlook.

9 Providing institutional niches for innovative futures work.

These significant contributions can help to initiate the crucial shifts of perception, policy and practice that form the pivot upon which the global megaculture now turns. Nevertheless, it is essential to up-grade IOFs and to constantly improve the quality of their work.

It is clear that foresight work cannot be identified with particular limited interests - it is emerging in many different places simultaneously. This represents a development in human perception. However, with some exceptions, foresight work still remains marginalised. Yet if it represents the leading edge of social innovation, this is just what we would expect. Given the nature of the barriers involved, a strong shift towards a concerted implementation of foresight will necessarily take some time. I propose a number of general guidelines for the expansion of foresight activity, as follows.
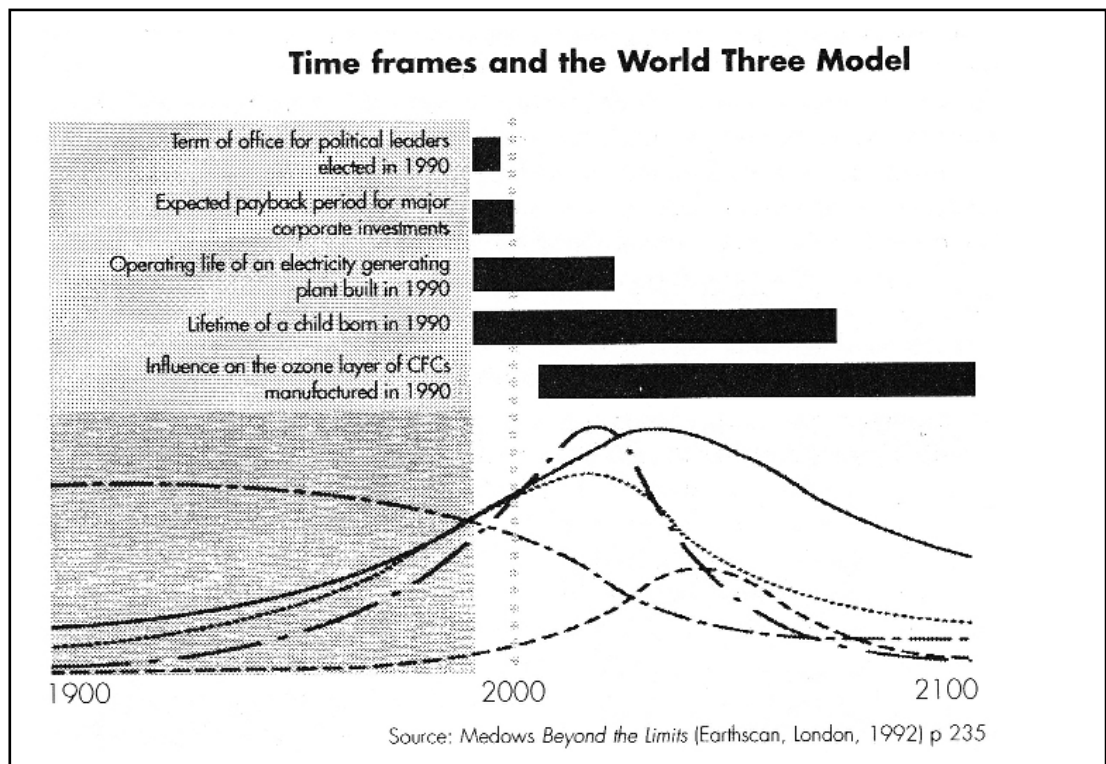
It is clearly essential to build up effective constituencies of support. This implies attention to communication and publicity through the careful use of the media, public forums, and effective public relations.

Quality control should form an essential part of the modus operandi of any such institution and should be applied across the board to staffing, publications, public events and foresight work. It is important to ground any foresight initiative in modes of enquiry, action and communication that are sufficiently robust for the difficult tasks involved In part this means implementing an explicitly futures-related and interdisciplinary perspective, accessing a range of methods and approaches and, most crucially, drawing on a substantive ethical foundation.

Communication between those working within the foresight field is necessary to share resources, provide feedback, facilitate networking and avoid duplication. There is an urgent need for research on foresight contexts. They represent a true cultural innovation, the value of which can scarcely be underestimated. Since the concerns of futures organisations are broadly oriented toward public wellbeing, their work should be seen as a public service and funded accordingly.

Timeframes

For most human purposes time-frames range between seconds and years. As noted above, each human activity has an appropriate time-frame (see figure 10). For most planning purposes, they generally range between one and five years. In politics, the ultimate timeframe is the next election, yet human activities have consequences that extend over millennia. Two examples are the extinction of

Time frames and the World Three Model

Term of office for political leaders elected in 1990

Expected payback period for major corporate investments

Operating life of an electricity generating plant built in 1990

Lifetime of a child born in 1990

Influence on the ozone layer of CFCs manufactured in 1990

1900   2000   2100

Source: Medows *Beyond the Limits* (Earthscan, London, 1992) p 235

species and the creation, use and storage of fissile materials such as plutonium. This suggests that the prevailing short-term planning timeframes may be mismatched with some longer-term phenomena.

Different Timeframes for Different Purposes

Can particular timeframes be matched to certain activities? For the purposes of social policy, economics and education, for example, there is a case for establishing a more extended timeframe. A one- or two-hundred year present may provide a more suitable timeframe for many purposes than the one-to-five-year plans that form the basis of modern Western political and economic projections. However, the underlying point is that, while in general some activities need to be matched with longer timeframes, the more important shift is toward the conscious use of timeframes themselves. The interaction of temporal process with human culture is a fascinating field of study with important implications for the organisation of human affairs.

Limits to Growth

Several years before the Meadows team published *The Limits to Growth*, Lewis Mumford wrote incisively about the way that the removal of limits had become a central postulate of the industrial complex: there is only one efficient speed, faster; only one attractive destination, farther away; only one desirable size, bigger; only one rational quantitative goal, more. The consequences of this postulate are such that the current driving goal of Western society is to remove limits, to hasten the pace of change, to smooth out seasonal rhythms and reduce regional contrasts ... to promote mechanical novelty and destroy organic continuity.13 Mumfords cultural critique goes to the heart of the global dilemma. The belief that nature should be conquered was an unquestioned presupposition within the Western worldview. Yet the operating assumptions derived from this enterprise have disastrous implications. Here is a very clear demonstration of the need for an analysis which probes beneath the surface. It is the lack of such depth which, perhaps more than any other factor, disables the attempts of futurists and others to articulate solutions to global problems.

The Limits to Growth took a basically Malthusian point of view. It predicted that continued growth would lead to famine, the exhaustion of natural resources and the degradation of the environment. However, it concluded that man can still choose his limits and stop when he pleases by weakening some of the strong pressures that cause capital and population growth, or by instituting counterpressures, or both. If such options were not taken up, then one or another part of the global system would collapse and growth will be stopped by pressures that are not of human choosing.14 Clearly this is an argument which will make people uncomfortable, but it is not one which will alter an entire culture because it exerts little discernible effect upon the underlying worldview assumptions.

A similar error was made in *Our Common Future*, otherwise known as the Brundtland Report.15 This attempted to show how economic growth could be made safer and distributed more equitably. But lacking an incisive critique of the operating assumptions of Western society, it could not provide any real solutions. In contrast, *Beyond the Limits* (1992) looks at exponential economic growth in a finite world and discusses the dynamics of the transition to sustainability. It also provides a succinct rationale for the institutionalisation of futures thinking, as below.

Because of the time it takes for forests to grow, populations to age, pollutants to work their way through the ecosystem, polluted waters to clear, capital plants to depreciate, and people to be educated or retrained, the economic system cant change overnight, even if it gets and acknowledges clear and timely signals that it should do so. To steer correctly, a system with inherent physical momentum needs to be looking decades ahead [emphasis added].16

Clearly, economic growth needs to be reconceptualised. Does it merely refer to material accumulation, or could there be important dimensions of non-material growth which Western culture has overlooked?

Future People

If there is one persistent theme in futures literature, it is the struggle between human intentions and the seemingly impersonal forces of technology. The predominant impression to emerge from popular culture is that futures are externally constructed by scientific and technological means. It is easy to find images and descriptions of future cars, spaceships, cities, computers and so on. Yet, if people are depicted at all it is via externals - they are either tending machines or robed in futuristic clothing. Credible images or conceptions of future people as people are almost impossible to find. Why do technologies dominate? Late industrial outlooks are complicit in a process by which the historical imperative appears to drift away from people and become invested in the products of human ability and intelligence. It is then but a small step from seeing people as relatively powerless servants (or even victims) of an infinitely more powerful socio-technological system. The futures which then arise are wholly dystopian in character. A future dominated by technology is not a future for human beings. There is a very great need to locate a counter-dynamic to compulsive technological innovation and development. The transpersonal perspective may provide exactly this.

Belief in the isolation and separateness of individuals is a persistent Western myth. From this point of view, personal identity ends at the surface of the skin. A more productive view considers interactions between individuals and the wider environment such as flows of food, energy, oxygen and multilevel relationships. Close regard for these connections reveals our immersion in a diverse web of being. 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. The path to transcendent awareness is not particularly easy to achieve. However, the recognition that there is a path and a means of liberation from technocratic futures lends the notion a compelling edge.

The study of transpersonal phenomena is of major interest because it opens out human options for development and change that could not, perhaps, even be imagined from within the confines of a technocratic worldview. It provides a basis for renegotiating accepted views of the past and also for making the imaginative leap toward wholly other futures. Ken Wilber is a major exponent of this approach. He 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, as chronicled 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 technological) development and aspiration. It is important to note that this does not usher in the new millennium. Wilber cautions against New Age enthusiasm and points out that, since it took a terrible 15 billion years to reach the present stage of human and cultural evolution, a new civilisation is unlikely to arise tomorrow or next year 17. Levels of consciousness beyond the mental-egoic can certainly be achieved now but may not be widely attained for decades or even centuries. However, if these levels of consciousness are understood as contributing to a transformed human outlook, they are of immediate interest and value.

Wilbers characterisation of the Great Chain of Being 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 futures debate. Again, the stage of psychic intuition is characterised as the beginning of transcendent openness and clarity, the awakening of a sense of awareness that is somehow more than simple mind and body.18

Openness, clarity, awareness: such terms refer to human qualities that have hardly figured in current futures debates. To begin to place them at the very centre of our futures vision is to shift the focus of concern away from a technocratic world towards the constitution of an essentially human world. This places the means to reverse the dominance of the machine and the technocrat within imaginative grasp, thereby returning choices to individuals and groups lost in the nightmare of the megamachine.

An Agenda for the 21st Century

An agenda for the twenty-first century is needed now because intentional change takes time. It must be organised. The necessary resources must be found and deployed. Administrative and logistical infrastructures need to be created. Enterprises need time to develop and grow. Yet, given the complexity and the nature of the crises facing both humankind and the biosphere, one can easily feel overwhelmed. It may be helpful to identify some broad priority areas around which such an agenda can be created.

Repairing the Damage

Given the enormous destruction wrought by the industrial system upon the biosphere, repairing the damage has become a major imperative. Many ecosystems have been completely destroyed, while others have been severely compromised. Entire species of plants and animals have been lost. This destruction dynamic must be replaced with a new restoration dynamic. There is wide scope for a series of new professions to develop from the confluence of ecological science and environmental activism. In the next century I would also expect to see new communities devoted to ecological restoration springing up in devastated areas around the world.

Creating Sustainable Economies

The creation of sustainable economies will be harder, but in the end, it is inevitable because a non-sustainable economy is just that. Growth will need to be redefined. Resources will need to be revalued. Environmental consequences will need to be brought into all economic calculations, instead of being dismissed as an externality. A whole host of new qualitative indicators will be needed. At a deeper level, the ideologies and power systems that drive the technocratic machine will have to be replaced. Similarly, the timeframes that are applied to human economic life will need to be reassessed. Most importantly, it will be necessary to escape from the chronic short-term thinking now common in business, government, industry and education.19

Releasing Human Potential

Some see the release of human potential as the key to cultural renewal. Everyone has within them enormous capacities and powers that are seldom engaged in everyday life. Those who are able to recognise and develop their own potential have the ability to become agents of change. There are many futurists whose lives attest to the truth of this idea. One of the most impressive was the late Robert Jungk.20 The whole history of innovators, social activists and citizens action movements shows that individuals, when linked with the strong grassroots organisations and productive ideas, can create an irresistible force of change.

Creating Institutions and Processes of Foresight

As noted, foresight is an essential human capacity that should be mobilised within society in the public interest. It is not just a personal capacity. It needs to become an essential ingredient in public policy formulation and decision-making at all levels. Foresight will be even more essential in the twenty-first century than at present. But since it will take time to create the institutional infrastructure and train the people who will carry it out, this task should be started without delay.

Finding New Purposes and Meanings

In many ways this is the goal of critical futures work. It begins with a critique of what is culturally redundant, and then proceeds to develop alternative ways of knowing and being. The purposes and meanings that have guided the Western world over the past 200 years have created a world of contradictions such as those between great riches and extreme poverty or sophisticated scientific knowledge and environmental decline. The process of selecting new purposes and meanings will not be easy as powerful groups always seek to maintain the status

quo. Nevertheless, the redefinition of redundant social principles and practices is long overdue. This process of redefinition and implementation will be the major task of the twenty-first century.

Re-inventing Culture Through a Renewed Worldview

The way we see the world dictates the way we use it. So the assumptions embedded in the foundations of industrial culture need to be examined and, where necessary, transformed or discarded. A renewed worldview will retain much that is good and useful from earlier times such as notions of justice, equality and so on. But it will also include other elements such as sustainability, stewardship and a global, long-term view.

I have suggested that cultural innovation can arise from the inner dynamic of higher human capacities, but the fact is that no one really knows if this will actually occur. The type of culture that will follow from the present cannot be specified fully in advance. What is certain is that, if the human race is to survive in a world worth living in, a world rich in other life forms, rich in resources, rich in human and ecological options, then it will be by virtue of a culture based on assumptions very different from those now operating.

Is Futures Study a Discipline?

The futures field exists because, as Schell once noted, formerly the future was given to us, now it must be achieved.21 This is a devastating assertion - but it happens to be true. So in one sense we have very little choice: the range of technological means at our disposal, the sheer number of people and the dynamism of our social systems have eliminated the notion that the future is a natural extension of past and present. Instead, we are confronted with a range of future possibilities that make entirely new demands upon individuals and cultures. Whether we like it or not, whether we are ready or not, and regardless of the manifest imperfection of current methodologies, futures scanning has become a sine qua non of civilised life.

The futures field offers a variety of symbolic, intellectual and practical responses to the world problematique. Within the threefold division of the futures field given above, some progress can certainly be discerned. At the hard end of the field are writers such as Michel Godet whose work reflects the highly sophisticated methodology developed in France called *la prospective*.22 At the soft end, the Futures Invention Workshops of Boulding, Ziegler and Jungk seem to be very fruitful in the way they facilitate adaptive and creative human responses to fear and threat. The combined efforts of environmentalists, feminists, peace workers and other progressive social activists show that the future can be created through directed human action.23 However, it should be noted that successful change takes place not only through simple intentional acts: it is iterative, uncertain, experimental. Small changes in desired directions are more common than systemic ones, and failure is more common still. Nevertheless, this does not invalidate futures studies as a discipline or field of enquiry.

It is true that negative views of futures still remain commonplace, and are likely to remain so. It is true that understanding the metaproblem takes time and effort. There is still too little futures work carried out explicitly in the public interest. The educational enterprise on the whole, still looks backwards. Yet from another perspective, these oversights and misperceptions are grist to the mill of responsible futures work. Many writers are engaging in a fascinating new discourse that has wide implications for human development. For example, Paul Hawkens brilliant book *The Ecology of Commerce* overturns conventional business thinking and outlines the essentials of a restorative economy. Equally, Duane Elgins work entitled Awakening Earth, provides access to the long view through an elegant account of the stages of future cultural evolution.24

Ogilvys work is highly relevant here. His account of normative scenarios in relation to developments in the humanities has helped to situate the futures enterprise within the wider stream of learning and scholarship.25 The work of Ken Wilber is also most pertinent as it has provided the field with a comprehensive framework for self-understanding that integrates surface phenomena with deep structure. However, there remains much to be done to integrate the various branches of futures scholarship and present the fruits of futures research more effectively.

Michael Marien has rightly called for a post-modern standard of scholarship so that futures workers may become a community of scholars on a global stage.26 It is to be hoped that UNESCO and other similar organisations will help facilitate the emergence of such a truly international and inter-cultural community.

The search for greater legitimation of the field will not be assisted by spurious claims to scientific status, but by careful, scholarly work, clear, open communication and participatory enabling processes such as the futures workshops. Self-help schemes such as the Prep 21 project (which is surveying tertiary futures teaching world-wide and providing a much needed support network for practitioners) may also have a role. Colleges and universities have an essential role to play in the further development of the field. Indeed, they could be considered as institutions of foresight in their own right.

Four points emerge. First, it is essential to have a reflexive and critical view of futures work in order to dispel hubris and keep the door open to new ideas. Second, the most productive approaches now incorporate a metatheoretical dimension which examines the foundations of our fragmented culture with at least as much care as its more visible superstructures. Put crudely, this means de-emphasising the over-hyped surfaces of gadgets and machines and paying much more attention to the hidden cultural assumptions and commitments underlying them. The myth of technological supremacy should be decisively rejected in favour of more cultural and critical perspectives. The movement from surface structures to paradigms, worldviews and ways of knowing is essential for all futures-related enquiry. Third, open and clear communication is vital. There are still too few futures writers with sufficient range, penetration and eloquence to be taken seriously in the upper echelons of intellectual enquiry. We need to encourage new writers so as to facilitate scholarship and research. Fourth, I would like to re-emphasise the importance of looking beyond the status quo and the associated imperialism of the present which shapes and distorts our worldview in major ways. Given the current prospects for humanity and the biosphere upon which we depend, one of the most responsible things anyone can do is to question the status quo. However, this can be risky work since it challenges many entrenched notions and practices. It will therefore not command universal approbation and support.

It is clear from the foregoing that futures concepts are among the basic building blocks of the field. The research methods and applications of futures study emerge through: scholarly enquiry; the formation of hypotheses; critique and social innovations; argument and the attempt to renegotiate cultural commitments and constitutive meanings. The usual tests of validity apply to this work: fit with the evidence, quality of argument, usefulness, etc. This locates such work firmly within the mainstream of intellectual life. What is distinctive about futures work is that it seeks a wider view of human affairs than can usually be achieved by more narrowly focused disciplines and fields, that it possesses a range of methods for investigating futures potentials (and their many impacts within the present) and that it therefore augments and extends our capacity to make careful, long-term judgements. Such qualities and outcomes have great social utility.

Since futures studies supports disciplined enquiry in the ways described, it can be considered a discipline like any other. It should therefore be treated like one and given appropriate academic support, especially through the establishment of university departments, courses and school subjects. For all their drawbacks, they are an essential element of discipline-building. However, such developments will be no substitute for bringing the resources of disciplined enquiry such as clear argument, valid supporting evidence and fruitful results to bear on futures problems within and outside of academia. Such problems will not go away. Now that we have entered the 'great transition' beyond industrialism, they will become more urgent and pressing with each passing year.

Footnotes

1. For a more detailed view of the problems and shifts involved, see Martha Rogers and Allen Tough, 'What happens when students face the future?', Futures Research Quarterly, vol. 8, no. 4, Winter 1992, pp. 9-18.

2. Most of these are drawn from Richard Slaughter 1996 (a), *Futures Concepts and Powerful Ideas* (2nd edn), Futures

Study Centre/DDM, Melbourne,

3. Gerald Edelman 1992, *Bright Air, Brilliant Fire: On the Matter of the Mind,* Basic Books, New York.

4. For a more detailed critique of the Western worldview, see Richard Slaughter 1995 (b), *The Foresight Principle: Cultural Recovery in the 21st* Century, Praeger, Adamantine, London.

5. See Hazel Henderson 1995, *Paradigms in Progress: Life Beyond Economics*, Adamantine, London.

6. An excellent review of both is provided by Doug McKenzie-Mohr and Michael Marien 1994, 'Visions of sustainability', Futures (special issue), March, vol. 26, no. 2.

7. See David Hicks 1994, *Educating for the Future: A Practical Classroom Guide*, World Wide Fund for Nature, Godalming, UK; also Slaughter 1996 (a), op. cit.

8. For outlines of seven 1OFs and their implications, see Slaughter 1995 (b), op. cit., chapter 7.

9. This notion was first outlined by Elise Boulding 1978, 'The dynamics of imaging futures', World Future Society Bulletin, vol. 12, no. 5, pp. 1-8. It has since been taken up and used widely.

10. See McKenzie-Mohr and Marien 1994, op. cit.

11. Ruth Benedict 1961, *Patterns of Culture*, Routledge & Kegan Paul, London,p.2. Slaughter 1995 (b), op. cit.

12. Lewis Mumford 1964, 1971, *The Pentagon of Power*, Secker & Warburg, London, pp. 172-3.

13. Donella Meadows et al. 1972, *The Limits to Growth*, Universe Books, New York.

14. Gro Harlem Brundtland et al. 1987, *Our Common Future*, Oxford University Press, London.

15. Donella Meadows et al. 1992, *Beyond the Limits*, Earthsean, London.

16. See Ken Wilber 1983, *Up from Eden*, RKP, New York, pp. 7-1 1.

17. Ken Wilber 1983, ibid., p. 324.

18. Paul Hawken 1993, *The Ecology of Commerce*, Weidenfeld & Nicholson, London.

19. See my interview with Robert Jungk, Richard Slaughter 1992, 'One man revolution', 21C, vol. 1, no. 6, Winter, Conunission for the Future, Melbourne, pp. 40-5.

20. Jonathan Schell 1982, *The Fate of the Earth*, Picador, London, p. 174.

21. Michel Godet 1993, *From Anticipation to Action*, UNESCO, Paris.

22. See Warren Ziegler 1994, *Enspiriting: Transformative Practices for the 21st Century*, Futures Invention International, Boulder, Colorado.

23. Duane Elgin 1993, *Awakening Earth*, Morrow, New York.

24. Jay Ogilvy 1992, 'Futures studies and the human sciences: The case for normative scenarios', Futures Research Quarterly, vol. 8, no. 2, pp. 5-65.

25. Michael Marien 1994, 'Cultural trends, troubles and transformations', Futuresco, no. 4, June, UNESCO. Paris. p. 32.

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