

PROBING BENEATH THE SURFACE

Review of a decade's futures work

Richard A. Slaughter

This article looks back over a decade of futures work. It looks at the development of critical futures study, at several key premises and some outcomes in terms of teaching, research and other products. From this perspective aspects of the wider field are then briefly discussed. One proposition is that futures study and research do constitute a true discipline (or metadiscipline) for scholarly enquiry. While the field still suffers from earlier weaknesses, it has continued to develop and is likely to achieve wider acceptance and application. A second proposition is that for such acceptance to take place it will need to incorporate approaches which deal with continuity and change at a range of levels. The need to communicate difficult issues clearly is a continuing challenge. A critical futures method provides some of the necessary tools.

In my early seminars on futures I used to launch straight into a brisk run-through of rationales, concepts, methods and applications—and then puzzled about why some sessions ended in mutual incomprehension. Perhaps my own anxiety was partly to blame. I finally realized that it was a mistake to deal *only* in decontextualized abstractions. So I began to draw more fully on shared experience. That still represents a sound strategy because it is from the viewpoint of persons in the world (rather than academics and researchers in ivory towers) that we achieve true communication. So this review starts with some factors which led me toward a futures perspective. In this way I can emphasize *commonalities* of human experience in the late 20th century. From the latter viewpoint we are all equal and can claim no privileged knowledge.

As a child and teenager I read a great deal of futures fiction. Yet as I

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grew older one key question slowly emerged: why were so many stories about *disastrous* futures? It was many years before I understood how writers of speculative fiction reflect aspects of their *present* world, and displace them imaginatively into futures which, far from presupposing acceptance, may also invite falsification. In retrospect, it is obvious that this insight underlay much later work. A different beginning lay in a description I found of a once-wild area close to where I was born. The description powerfully evoked the ecological richness which had existed there. Yet I had only known that same area as Southsea Common—a sterile area of flat playing fields by the sea. No wildlife to speak of. I realized I was living in a long process of *change*, and that many important changes had occurred before I was born. Somehow that insight, gleaned from a place I thought I knew well, carried more force than all the abstract history and geography I had learned at school.

Then, while at college in the mid-1960s, I came across Edmund Leach's *A Runaway World*.¹ This extended the argument about irreversible change to a global scale and, moreover, it suggested that no-one was in control of the process. That seemed a startling conclusion at the time. It was proven beyond doubt when I lived for six years in Bermuda, a tiny chain of isolated islands in the Western Atlantic, some 1000 km south of New York.

Bermuda made it clear that something had gone seriously wrong. How else to explain the way that the tropical ecology had been bulldozed away, revealing a sea of houses? It is a sad story of greed, ignorance and short-sightedness, a story familiar to many islands. Here the future seemed bleak because too few cared about the wider picture and no-one had the authority to cry 'enough!' and make it stick. Environmentalists who sought to preserve residual wild areas from 'development' had some limited successes, but they were no match for the combined forces of economic and population growth.²

Sensing the impotence of preservationism and protest, I began searching for a framework which might address the central issues directly. I read widely and had the fortune to discover Lewis Mumford's work early on. His view back over centuries of cultural and technical development suggested that contemporary problems have ancient origins, that 'the megamachine' (his term for a dehumanized social system) was fully developed during the pyramid-building age of Egypt. Equally important was that he identified the profound limitations of technicized culture and revealed the essentially *human* sources of resistance to it. Crucially, he argued that before human-kind could make anything much of the outer world it had to gain control over the inner world of experience, dreams, emotions etc. He therefore saw tools and machines as essentially derivative.³ In this view, our propensity to label whole eras (eg the 'industrial' era, the 'information' age) according to stages of *technical* development seemed misplaced. I began to wonder if some large chunks of contemporary life were quite what they first appeared to be.

In the case of Bermuda, a commonsense or taken-for-granted view would simply see it as a tourist paradise. That is indeed how it represents itself externally, how it *markets* itself. It says, in effect, 'this is the version we want you all to believe'. But to live there is to know that the dream is empty, even for the very rich. You come to see the damage, the cost, the

lost aspirations, the crime, confusion and despair arising out of the post-war development process. You notice the similarities to stories you had read and realize that this is one version of dystopia. Only there is no author in charge of the text (because the text is history). Control is problematic—unless you count a sugar-coated, naive and cynical economic machine which works hard to define the dominant social reality in suitably anodyne terms.⁴

Living in Bermuda was more instructive than many years spent in formal education because while the latter exists to promulgate the dominant myths and stories of a culture, the former showed that such myths and stories (about progress, standards of living, growth) often serve limited or irrational interests which do not readily yield up their secrets or their hidden agenda. As a microcosm of the world system, Bermuda did not inspire confidence in the future.

With this in mind it is easier to see why I took the considerable risk of returning to university to study futures. I knew that there were few ready-made jobs for futures people and that I could not know the outcomes of this decision. Yet I felt I was on to something useful. Futures study might be able to construct a synthesis much wider than those permitted by the false boundaries of separate and exclusive disciplines. In time it might suggest answers to some key questions. Does the future necessarily *have* to look so bleak? What can be done about it? What are the *real* alternatives?

Development of critical futures study

From an academic viewpoint there were two main starting points. One was a review of the futures of education movement as it had developed in the USA since the late-1960s. More important was a detailed analysis of theories and practices within the wider futures field. The field can be defined by its core concepts, methodologies and concerns as well as by its social relations, history, literature and journals such as *Futures* (notwithstanding that it blends invisibly into many other fields of enquiry at the margins). Table 1 and Figure 1 provide two overviews which I have found useful in teaching and research. Table 1 is a *functional* outline, emphasizing approaches, techniques and some broad categories of work futures people can be identified with. It views the field as extending along a spectrum ranging from futures research, through futures study to the futures movements. The spectrum is participatory and open at one pole and closed (or professionalized) at the other. Figure 1 is a *conceptual* overview, depicting the field as a forward-looking matrix with a range of 'outputs' such as issues, themes and applications. Neither figure does justice to the complicated reality but each provides some initial answers to questions about 'what futures people do'.

Careful study of the field suggested two major conclusions. First, that the *impulse* underlying much futures work reflected substantial and widely shared concerns about such things as the nature of change, uncertainty and the need to avoid undesirable futures. These are problems which concern everyone, or should do so. The second conclusion was that *at that time* dominant US approaches tended to be deficient in certain key respects.

While outstanding individuals had succeeded in establishing enviable 'track records' and an accomplished tradition of instrumental futures work

TABLE 1. THE FUTURES FIELD: TOOLS FOR MANAGING CHANGE

Futures research (Major knowledge-seeking focus)	<i>Prediction</i>	Trend extrapolation
	<i>Economic and technical forecasting</i>	Social indicators Social forecasting Technology assessment
	<i>Systems analysis</i>	Global and societal modelling Long cycle research Simulation of change processes
	<i>Management science</i>	Issues management Decision and risk/benefit analysis Policy analysis
Future studies (Synthesis, criticism and communication)	<i>Scenario writing</i>	Ethnographic futures research Cross-impact analysis Delphi surveys
	<i>Comparative surveys and critique of futures issues</i>	Digests, indexes, overviews of problems and dimensions of change
	<i>Futures in education</i>	Professional training and development Curriculum innovation and course development Interdisciplinarity
	<i>Speculative writing</i>	Social imaging processes Creation and falsification of images Exploration of the trans-rational
Futures movements (Stimulating, reconceptualizing and possibly leading change)	<i>Networking</i>	Global communication Social innovations Green politics
	<i>Theory and practice of alternative lifestyles</i>	Alternative technology Reconstruction of community New age cultures and values
	<i>Humanistic and transpersonal psychology</i>	Future imaging workshops Despair and empowerment work Psychodrama Psychosynthesis

(often for large organizations, including commercial corporations) the literature was permeated by pop psychology, millenarianism and an ideological naivety which was truly breathtaking at times.⁵ It seemed that while the *practice* of futures work (including futures in education) had developed rapidly, the underlying foundations, and the accounts written of this work, left much to be desired. Indeed this conclusion had also been reached by some US observers.⁶ These weaknesses greatly inhibited any attempt to introduce futures study and research into a chronically past-oriented culture like the UK. I therefore sought a more robust conception of futures work—one which would be able to stand up to criticism without shying away from crucial issues about ideology, power, language, meaning and fundamentally conflicting interests. The early results were published in 1984.⁷

Critical futures study acquired its name primarily because it drew explicitly upon the work of the critical social theorists of the Frankfurt school and, in particular, that of Jurgen Habermas.⁸ Though it was by no

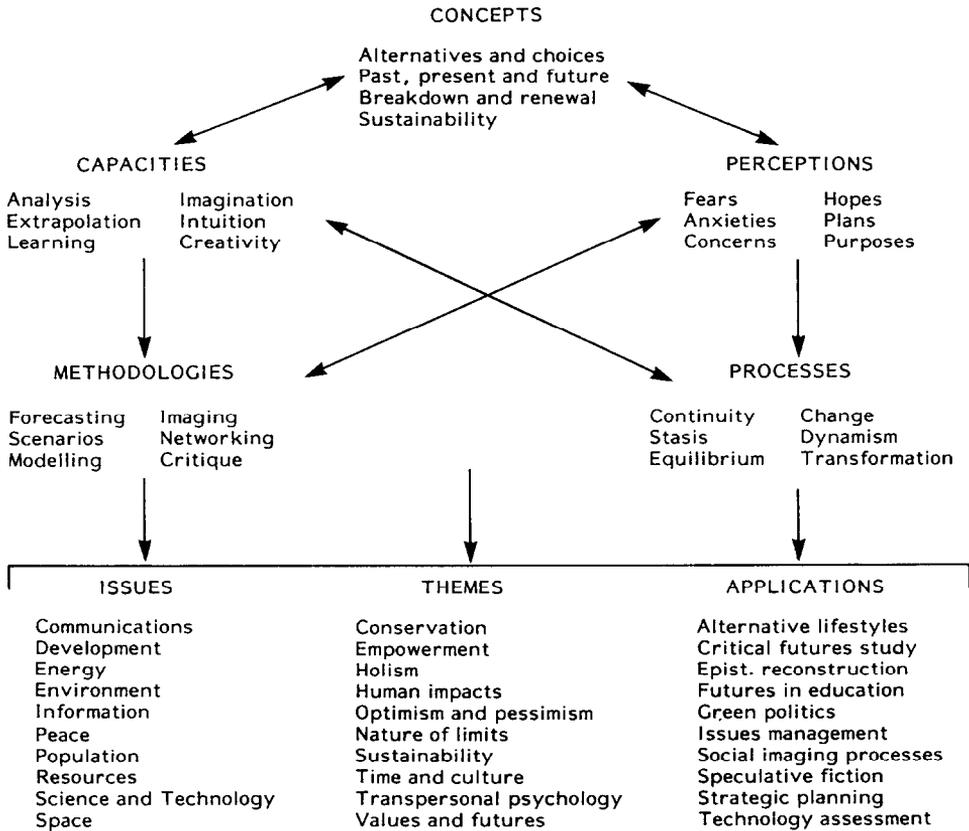
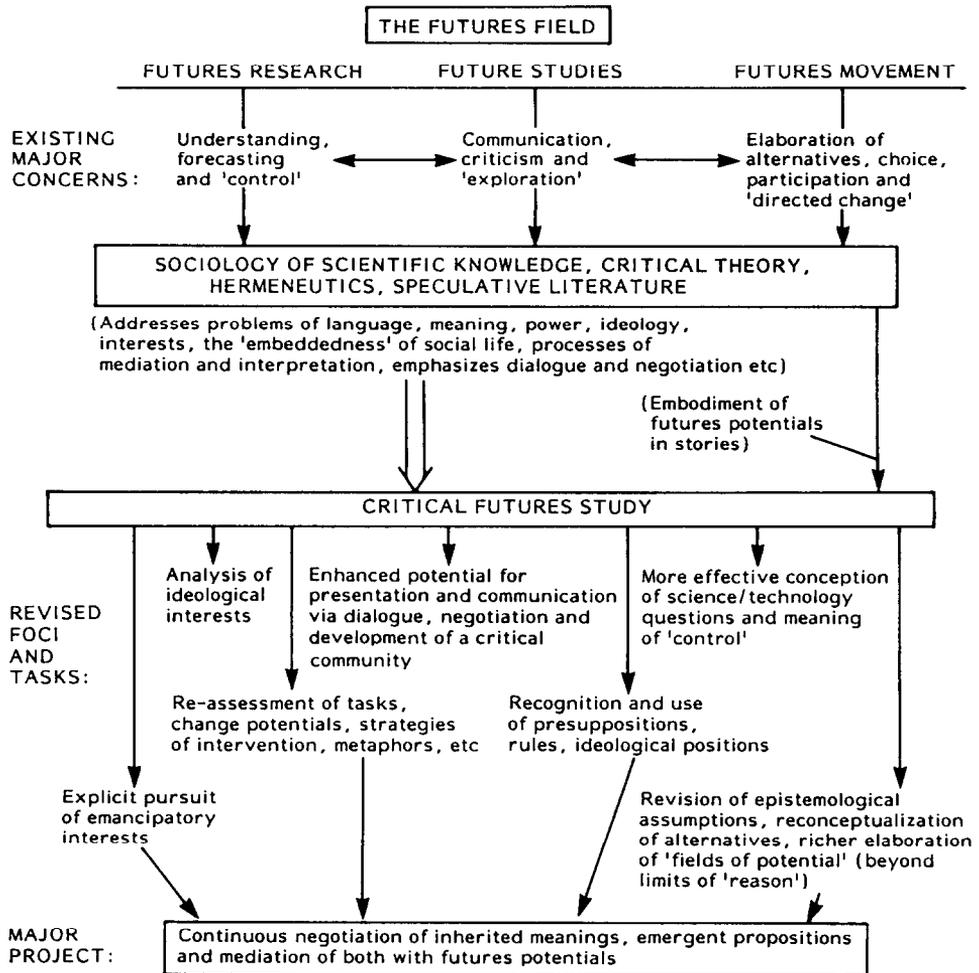


Figure 1. Futures study as a forward-looking matrix

means an easy task (nor, I should say, a task which is ever likely to be finished), it soon became clear that by examining the futures field through a 'critical filter' derived from critical theory, hermeneutics and the sociology of knowledge, one could begin to address some deeper questions which had earlier been glossed over. While there is always a danger of becoming bogged down in the problematics of such areas, I have come to believe that futures work which ignores them lacks penetration and depth and is therefore unlikely to command respect. This is a major reason why futures work still fails to impress within the advanced and interrogative discourses of higher learning and enquiry. (There are others to which I will refer below.) A diagrammatic summary of some of the implications of a critical approach is given in Figure 2. Since this work formed a basis for later developments it is useful to give a summary of some major premises, which are as follows.

- Discourse is not neutral. It is grounded in particular traditions and speech communities. Claims to 'objectivity' are therefore insupportable.⁹
- Similarly, technologies are not just 'neutral tools' which require enlightened decision making. They are complex social artefacts within which are embedded certain social interests and ways of viewing the world.¹⁰



IMPLICATIONS: Clarification, revision, re-assessment of futures field, improved articulation with real-life situations, problems and perceptions. More realistic goals and task setting. More effective embodiment, communication and deployment of resources and ideas

Figure 2. Schematic outline of critical futures study

- Given the above, reflexivity (or viewing one's viewing) is an essential skill. It makes clear that we are embedded in a world of intersubjective and culturally specific meanings. The latter cannot be ignored. They can be renegotiated under favourable conditions.¹¹
- Communication is best achieved when some equalization of power relations is assumed or created between the participants. The 'ideal speech situation' is one that is open, free and participatory. Hence, speakers (and writers) can avoid 'knowing best' since their knowing is

part of a wider, intersubjective system in which many presuppositions are neither fully rational nor explicit.¹²

- In this perspective a presumption can be made in favour of 'the human emancipatory interest'—that is, the primacy of human autonomy over and above technical and political imperatives.¹³
- 'Progress' as usually defined has become problematic. Its rehabilitation (or replacement) has much less to do with the regulation and control of external tools and technologies than with (a) understanding cultural change at the level of changing paradigms, worldviews and epistemologies, and (b) discerning the basis for qualitatively different futures.¹⁴
- An explicit focus on 'negotiating meanings' gives access to processes of breakdown and renewal which are obscured in more instrumental approaches.¹⁵
- Finally, stories are not 'just stories'. They reflect and embody aspects of social reality which otherwise tend to remain unnoticed. Furthermore, they give access to aspects of futures that cannot be derived from reason and analysis alone.¹⁶

I cannot say that these propositions are 'true' in any final sense. However, they have proved to be fruitful in looking in depth at many issues including the nuclear dilemma, images of science, technology and magic in children's media, the nature and grounding of speculative writing, changing social paradigms, human development and reframing education to include the futures dimension. Basically the approach provides *tools of enquiry* which allow one to 'interrogate' discourses, thereby revealing their partiality and the social and economic interests embedded within them. This is by no means a purely academic exercise. For in exposing these hidden commitments (commitments which we are all drawn into sharing in various subtle and not-so-subtle ways) critical leverage is reclaimed from the abstracted imperatives of money, profit, power and compulsive technical dynamism. Equally, by pointing up the severe contradictions between a ready acceptance of rapid structural change and the implicit use of business-as-usual assumptions, a space is created for more fruitful debate about divergent futures arising from different assumptions and approaches.¹⁷ The result is *an increase in freedom*. This is so because people who know that they stand secure at the centre of their own history *as agents* are well placed to engage in the negotiations of images and meanings from which futures are constituted.

It is true that some *sources* of critical futures methods lie in areas which may, at first sight, seem difficult. This does not mean that the central ideas cannot be communicated clearly! Work which is grounded in the ways I have sketched above can open out potentially important areas of enquiry at a range of levels. This is crucial because it seems to me that many problems confronting us cannot be solved in the terms by which they are first experienced and described. This cannot be overemphasized. A lot of the early futures literature has become something of a liability precisely due to the repetitious description of 'world problems' and the recommendation of banal or crude 'solutions' out of non-critical perspectives which simply miss the point.¹⁸ So what is the point?

Perhaps the key insight, and hence the major suggestion of this article,

is this: *I do not believe it possible to approach the great issues of our time without considering the frameworks of meaning and value which created them in the first place.* This point can be made more concrete through the architectural metaphor given in Figure 3 (no pun intended).¹⁹ Here the artist has drawn a parallel between physical architecture and social architecture. The former has a superstructure comprising all the familiar elements (buildings, streets, signs etc), an underlying framework, foundations and a site on which the whole complex rests. Similarly, the social structure (language, symbols, customs, laws etc) rests on a hidden structure of norms, assumptions, ethical and moral commitments which themselves stand or fall on the epistemological foundations of a worldview or paradigm. This makes it abundantly clear why superficial analyses often fail: they only consider surface structures.

There is evidence that discourses are level-specific and that, to some extent, different rules apply on different levels.²⁰ This means that accounts of 'world problems' are inadequate if they overlook the hidden foundations. That is why a metatheoretical perspective has become indispensable and why work in a critical futures mode places so much emphasis on transformations of *meaning*.

Some results

A perspective is of limited value if it is expressed only in terms of abstract ideas. To be useful in practical terms it should be embodied in ways which make its products available to the non-specialist. So I have tried to keep a balance between theoretical enquiry and tangible output. The latter has emerged through publications, methodologies and teaching.

Perhaps the most accessible publication is *Futures Tools and Techniques*.²¹ This is an attempt to present some methodological and conceptual resources of the field in a straightforward and unthreatening way. There are 28 starting points for enquiry organized in five sections: futures and time; information gathering; forecasting and analysis; imagination and creativity; and people, values and futures. The book has been

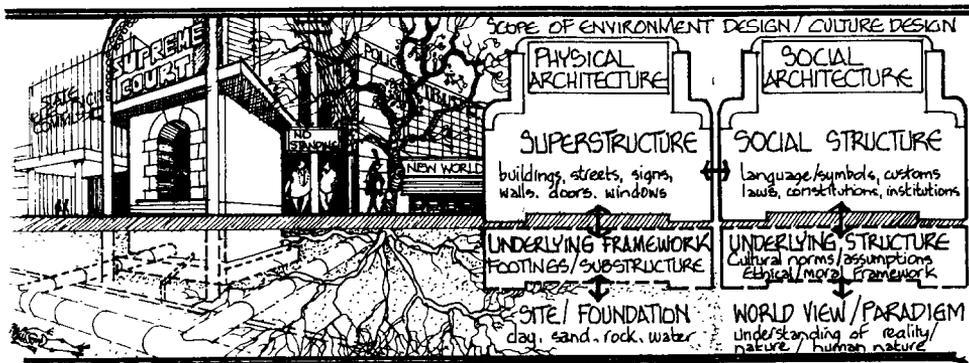


Figure 3. Architectural metaphor for relating surface structures to underlying foundations
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extensively trialled in the UK and Australia and will soon go into a third edition. At each stage it has been extensively revised and I expect this process to continue through successive editions. The book has been used by teachers and lecturers in a range of subject areas. It supports the view that futures is not just a subject, but a cross-curricular dimension with implications for many other fields of enquiry.

Recovering the Future is an academic monograph which considers the nature of critical futures study, applies the method to a number of areas and looks at the role of futures in education.²² The central hypothesis of the book is that while the outlook for humankind appears bleak, it does not follow that this is *necessarily* depressing. As futurists well know, an unwelcome forecast can become a 'datum' which can stimulate responses to falsify the projection. So *Recovering the Future* tries to explore the grounding of humanly viable futures. That is to say, it considers the epistemological foundations of a new (or renewed) worldview. In keeping with the importance I accord to stories, the book ends with a short story in which the viewpoint character looks into the abyss—and then beyond it to more life-sustaining possibilities. This exemplifies the point made by a number of futurists that futures work is not confined to rationality and technique but also embraces vision, linked to values and motives which lead beyond the impasse.²³

Another recent publication is *Studying the Future*.²⁴ This attempts to provide a readable introduction to the field for non-specialists, particularly teachers. It collects short essays by futurists, teachers and Australian writers, and represents one of the tangible outcomes of the Bicentennial Futures Education Project (BFEP). The latter worked intensively with 12 'lighthouse schools' in Australia which sought to integrate futures into aspects of their curricula. The experience of four of these schools is outlined here, and there is a short section on resources. I doubt that the book breaks new ground in terms of originality, but it does provide a comprehensible way into what can seem an esoteric area.

A similar intent is central to a further project now in progress: a *Futures Concepts Kit*. The idea for the kit came from seeing some simple diagrams I produced a few years back (about the interrelations between past, present and future) copied, re-copied, revised and modified over a period of time by different users. Linked with this was the observation that much futurist discourse (including my own!) simply misses most people. Even on the most optimistic assumptions, it seems unlikely that more than a tiny minority will ever seriously look into the futures literature or pick up and use futures methodologies. Yet some futures concepts are both powerful and structurally simple. If they could be expressed simply and illustrated well, perhaps they might diffuse into general usage as my time diagrams had. If so, they might help to support the very shifts of opinion and perception on which our survival now appears to depend. It seemed worth a try. So I selected ten key concepts and began to get them drawn up by graphics artists. An example is given in Figure 4.

It has steadily become clear that one of the most persistent themes in the futures field is the need to match various human activities with appropriate time-frames. Given that the mental present has no firm boundaries, it follows that in each situation we are confronted with choices about

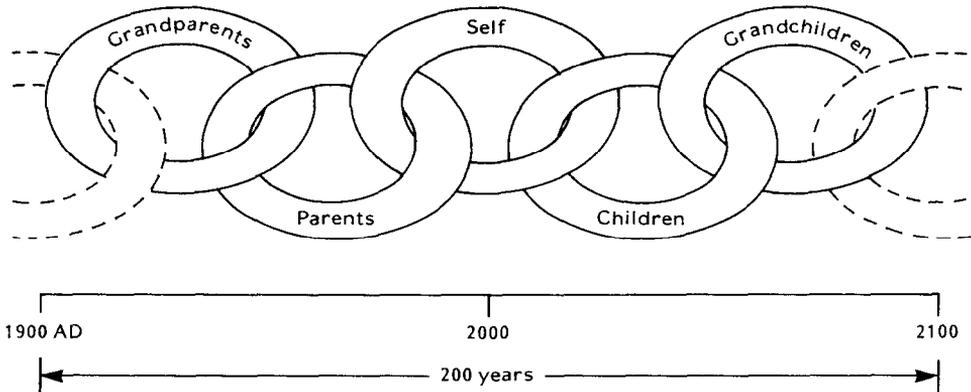


Figure 4. The extended present—a family chain

the time-frame we adopt.²⁵ For example, to drive a car requires a very narrow, close-up time-frame, which is adequate to making split-second judgments. On the other hand, at the level of cultural and ecological processes we are clearly making decisions with impacts over many thousands of years. This creates something of a dilemma: how to choose? Elise Boulding has provided an elegant solution which is of immense value for many purposes. She has suggested that we use the notion of a *200-year present*.²⁶ This puts us in touch with our recent origins and also with the immediate consequences of our actions and decisions. It is literally our temporal context, one which requires us neither to dig into the remote past nor to peer into the distant future. We are *connected* to this span of time in many ways, but not least through the lives of our families. The notion of reconnecting to a wider world of significance, process, interaction is one of the most fruitful and productive ways of moving beyond the alienation of the so-called 'industrial' era.²⁷ Here we have a very simple idea—the extended present. Yet the more I have worked with it, the more important it has appeared. If it became more widely used it would impact on a variety of meanings and practices and permit a reframing of the temporal context of many human activities. Imagine the shifts which could occur in economics if future-discounting rates were substantially revised.²⁸ Consider how our use of the environment might change. Think of how educational curricula would change to reflect *both* halves of this period. That all this emerges from just one concept demonstrates how productive the elaboration of futures concepts can be. I therefore conclude that concepts are as important as methodologies and emphasize them accordingly.

It will be clear from the foregoing that the research methods and applications of critical futures study emerge through scholarly enquiry, through the formation of hypotheses, through argument and the attempt to renegotiate meanings. The usual tests of validity apply to this work: fit with the evidence, quality of argument, fruitfulness etc. This locates such work firmly within the mainstream of intellectual life and there is therefore no need to be apologetic about it. What is distinctive about futures work is that it seeks a wider view of human affairs that 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 judgments in the present. Those who dismiss futures work overlook both its interest in the empirical study of present-day processes and the way its products and conclusions *return* to the immediate present and enrich (or modify) it. It can be empirically demonstrated that without this futures dimension, the present shrinks into an unlivable splinter of time within which there is no space for plans, purposes, goals or intentions. This is the temporal equivalent of dystopia, a narrow, constrained world of robots, victims and prisoners; not a world for people as autonomous beings.²⁹

There is one particular methodology or tool which emerges from a critical futures perspective. This is the 'transformative cycle', or T-cycle for short.³⁰ It developed from the observation that for every problem which had been identified, later observers and activists had put forward suggestions to deal with it. In other words, some had focused on what had gone wrong. I refer to this as 'the breakdown'. It refers both to surface dysfunctions such as unemployment, terrorism and pollution and, more significantly, to the disintegration of the Western/industrial worldview. The point is that any individual, group or society which experiences the world solely from the viewpoint of the breakdown is in trouble.³¹ Equally, however, innovators and activists do not have an easy time. They may gain a great deal of personal meaning and significance from their association with progressive causes but, by the same token, to the extent that they challenge the status quo, they will also encounter opposition. This could be dubbed 'the Greenham Common effect' or the 'Greenpeace effect'. Conflicts are inevitable because there is much at stake and there are *always* people with interests bound up in the way things were.

Nevertheless, the history of social inventions shows that persistence can pay dividends. Many social services and solutions to social problems exist now only because they were fought for and achieved by concerted action.³² In other words, some attempts to solve problems are selectively legitimated. Others fail to get a hearing or are thrown out at the stage of conflict and negotiation. We have now come nearly full circle. Except that the adoption of innovations leads on to two possible outcomes. One is a shift in the status quo toward some new synthesis or state. The other is toward a new breakdown process as earlier solutions are themselves overtaken by events.

Figure 5 shows this cycle of change in outline form. Notice that at *every* stage there is the possibility of what I call the 'autonomous recovery of meaning'. This refers both to the unbidden flash of insight which brings new illumination and to the quiet, patient work which creates new options as if from nothing.³³

The uses of the T-cycle are several. It brings together in a single process aspects of change which are often approached in isolation. Such a view makes it possible to see the potential for innovation and change in many otherwise oppressive situations (particularly when the level of analysis is adequate to the task at hand). It serves to temper ungrounded idealism by forewarning intending innovators of the challenges they will face, and also reassuring them that there have indeed been many past successes. I would not want this relatively simple model to be taken for an account of social

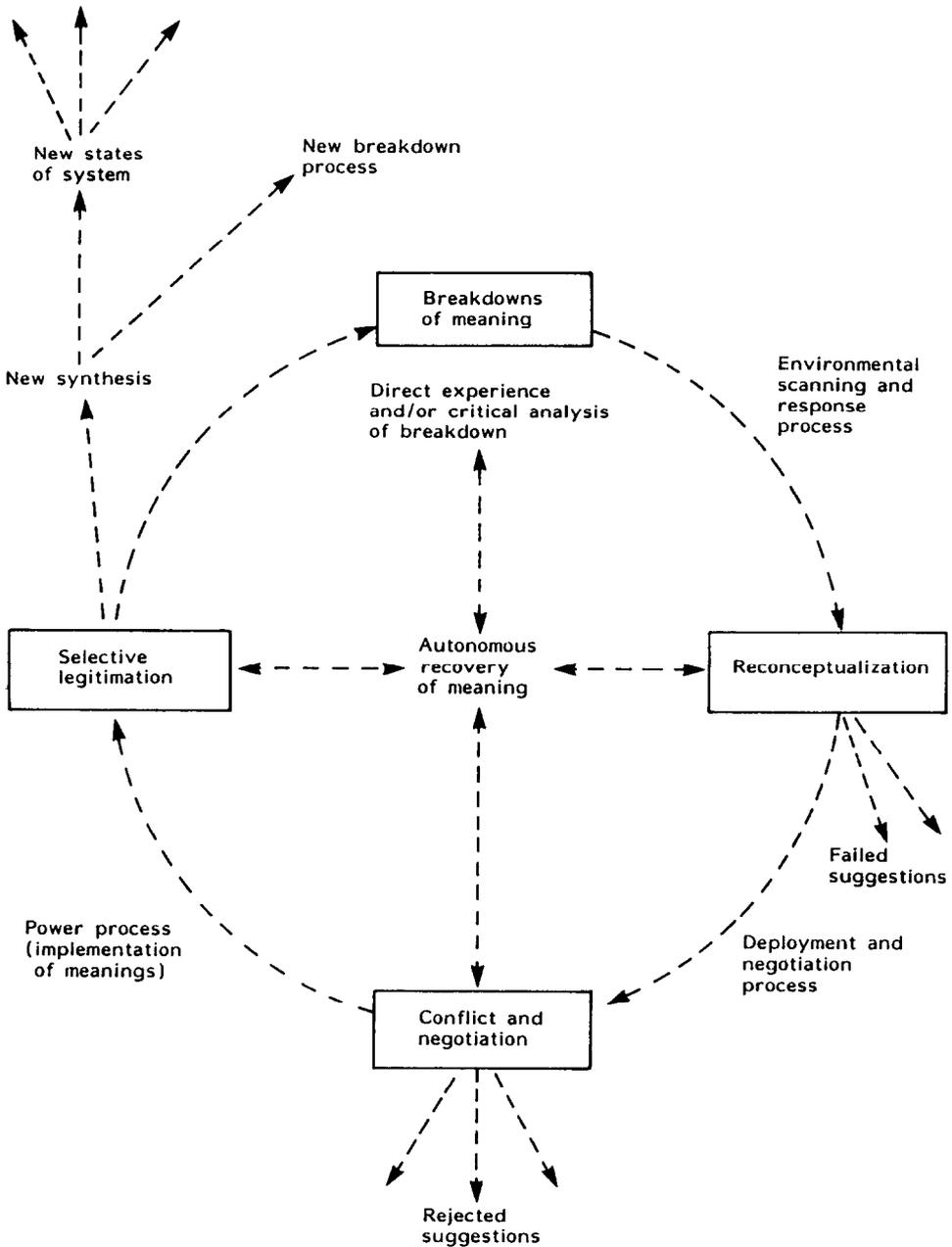


Figure 5. Schematic outline of the transformative cycle

change. However, it certainly reveals part of the picture since the accumulated impacts of progressive work in many fields is considerable. As a workshop tool it provides a strategic overview of social innovation and as a pedagogic aid it allows connections to be made between different events and stages. The T-cycle can be simplified or elaborated according to need.

Much could be said about the processes and results of teaching from the framework outlined above. But I will just sketch in some main conclusions in three broad categories—teacher education, postgraduate courses and professional.

One of the first courses I taught was called 'The Future of Work and Leisure'.³⁴ In retrospect, it is clear that I packed far too much into it and expected too much of busy teachers. Since then I have tried to pay more attention to where people are, to be less directive and more facilitative. One of the most fruitful contexts for this is the 'Professional Development Forum' which often takes place at the beginning of a term before people get tired and distracted by the pressures of work. Since 'one-off' sessions tend to be ineffectual, I have tried to develop a more sustained relationship with schools to permit proper follow-up work. This has met with modest success so far.

At the postgraduate level I have been responsible for two courses: 'Futures Study and Curriculum Design'³⁵ and 'Alternative Australian Futures'.³⁶ The former was a module in a Masters degree programme and was taught for three successive years to small, but enthusiastic, groups. The results made it clear that futures approaches can be highly rewarding professionally, and that therefore the *latent* demand for such courses is considerable. The Australian course was much more difficult and demanding. It drew on deeper sources to investigate 'the metaproblem', ie, the source of the world problems in paradigms, worldviews and ways of knowing. Some students had not completed enough reading to be fully comfortable with some of the concepts and methods employed. However, I am sure that the course pointed in the right direction, that is, away from immersion in taken-for-granted assumptions to the grounding and articulation of *real* alternatives based on different 'foundations'.

Finally, mention should be made of a three-day seminar entitled 'Strategic Issues in Higher Education' which took place recently at the University of Melbourne.³⁷ This was an ambitious attempt to adapt the QUEST (Quick Environmental Scanning Technique) process to the particular conditions of Australian higher education during a period of forced change and consequent uncertainty. Nearly 20 top administrators from institutions around the country gathered for an intensive three days' work. Given that we chose *the sector* as our primary unit of analysis and that we compressed the process drastically, some major procedural difficulties had to be faced. However, most of these were resolved, and the outcomes included significant skill transfers and a range of strategic options for individual institutions. The QUEST methodology is now being revised for other applications.

Reflections on the role of the futures field

The futures field exists because, as Schell once noted, 'formerly the future was given to us, now it must be achieved'.³⁸ This is a devastating assertion—but it happens to be true. So in one sense we have very little choice: the range of technical 'means' at our disposal, our sheer numbers and the dynamism of our social systems have eliminated the future as a natural and fluid extension of past and present. Instead it confronts us with a range of

possibilities which make entirely new demands upon individuals and cultures. One result is a progressive increase in existential tension and anxiety.³⁹ Whether we like it or not, and whether we are ready or not, futures scanning has become a *sine qua non* of civilized life. To achieve any future worth having means altering the balance between crude experience and future possibility. (If we relied only on the former it would be necessary to experience catastrophe before it could be prevented.) Since such an enterprise has never been *structurally* necessary before, we lack many of the epistemological, organizational and value bases for it. This is partly why some of the early futures literature is full of urgent warning and threat. However, the warnings and threats were never convincing because the framework of analysis and the implicit model of communication were both inadequate.⁴⁰ It is important to state, and to state clearly, that *no-one is in possession of the answers we need*.

It is important for futurists to acknowledge, as some have, that certain aspects of futures must necessarily remain problematic.⁴¹ There are clues, hints, fruitful possibilities and more. But it is just a conceit to imagine that there is a mythical Archimedean point from which to view past, present or futures. Even if there were, perfect reflexivity would be self-defeating. It would annihilate the grounds, and the possibility, of knowing anything. So, in that sense, the mission of some branches of positivistic science to possess all knowledge is a hopeless one. There is never any final knowledge, no final interpretation, because we never (knowingly) stand at the end of history. Moreover, the process of moving toward more sustaining (and sustainable) ways of life is a *collective* one. It requires the contributions of many different people and is inherently unpredictable. Similarly, the systems in which we are embedded are not readily changed. Successful change does not only take place through the simple forward loop depicted in the T-cycle. It is iterative, uncertain, experimental. Small changes in desired directions are more common than systemic ones, and failure is more common still.⁴² The upshot is that the grand ambitions of the futures field cannot be fulfilled. However, there still remains much to do.

In-depth analysis of the foundations of our culture have exposed many defective assumptions and commitments. They relate to questions about growth, progress, person/nature relations, temporal process and so on. Most fundamental of all are questions about purpose. Many continuities and impulses which underlay the social landscape and gave it meaning have run their course and are now perceived as empty and threatening.⁴³ This loss of a particular historical synthesis is 'the breakdown'. Its effects are pervasive and it is not an exaggeration to see the many forms of escapism and induced mindlessness in the culture as providing some sort of respite from difficult times. Yet, as Stafford Beer and others have pointed out, these 'surrogate worlds' are enervating and diversionary.⁴⁴ They inhibit constructive change.

Yet, at the same time, the futures field exhibits a cross-section of human responses to adversity. If we take the threefold division of the futures field given in Table 1 above, some clear indications of forward movement (I dare not say 'progress') can be discerned. At the 'hard' end of the field are writers such as Michel Godet whose *Scenarios and Strategic Management* is a *tour de force* of timely, innovative, work.⁴⁵ At the 'soft' or

participatory pole the 'Futures Invention Workshops' of Boulding, Ziegler and Bob Jungk seem to me to be increasingly fruitful in the way they facilitate adaptive and creative human responses to what is threatened or feared. Here the combined efforts of environmentalists, feminists, peace workers and other progressive social activists show that the future can be created through directed human action. Hence, no-one need ever feel helpless. The mental and emotional energy which it takes to feel depressed can be redirected towards more constructive ends.⁴⁶

It is true that negative, dysfunctional and naive views of futures still remain commonplace (and are likely to remain so). It is true that understanding 'the metaproblem' is difficult and takes time and effort. There is still far too little futures work carried out explicitly for the public interest. Education, on the whole, still faces backwards. Yet, viewed another way, these merely become agenda items for responsible futures work, and such work is being done by many people. In the central, synthesizing area of futures study recent works by Anderson and Harman go a long way toward correcting the 'one-dimensional' character of earlier futures writing and opening out a fascinating new discourse of wide interest and applicability.⁴⁷ The work of Ken Wilber is highly relevant here. It has not yet received the attention it deserves. However it provides the field with powerful metatheoretical tools and a comprehensive framework for self-understanding which integrates surface phenomena with deep structure.⁴⁸

The search for greater legitimation will not be assisted by spurious claims to 'scientific status', nor by other exaggerated claims, but by careful, scholarly work, clear, open communication and participatory enabling processes such as the futures workshops. I am very much in favour of 'self-help' schemes such as the 'Prep 21' project which aims to survey tertiary futures teaching worldwide and provide a much-needed support network for practitioners.⁴⁹ So long as they do not become remote 'ivory towers', colleges and universities have an essential role to play in the further development and utilization of the field.

In summary, I want to make four points. First, it is essential to have a reflexive and self-critical view of futures work. This protects us from undue pride and keeps us listening and learning. Second, the most productive approaches now incorporate a metatheoretical dimension which examines the foundations of our culture (and its present transition) with at least as much care as its more visible superstructures. Put crudely, this may mean de-emphasizing the over-hyped surfaces of gadgets and machines (which the public have learned to substitute for 'the future') and paying much more attention to the hidden assumptions and commitments underlying them. 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 the range, penetration and grasp of language that de Jouvenel displayed in *The Art of Conjecture*⁵⁰ or that Gould achieves in his fascinating and highly literate work *Time's Arrow. Time's Cycle*.⁵¹ Too much futures writing is bland, banal and superficial, or jargon-ridden and inaccessible. So we need to give thought to encouraging new writers and to facilitating scholarly study and research. There are not enough places where such work can be carried out. Fourth, I want to re-emphasize the importance of looking beyond the status

quo and the associated 'imperialism of the present' which shapes, and distorts our view in major ways. Given our current prospects, one of the most responsible things anyone can do is to 'take issue with the way things are'.⁵² However, this can be risky work since it challenges many entrenched notions and practices. It will therefore not command universal approbation and support.

Conclusion

A recent survey of scenarios for Australia's future concluded that not one major scenario held out the prospect of a peaceful, optimistic future for the country.⁵³ That conclusion contrasts vividly with dominant business-as-usual assumptions. It illustrates a central dilemma of the period. Not so long ago everything seemed to be going well. It was possible to believe in progress, development, security, work and an ever-rising standard of living. Now we are not so sure, and some powerful feedback processes are sending us warnings from the global system. Our common sense tells us that this is a time to proceed with sensitivity and care. So more than ever we need to invest in the exploration of *divergent* and sustainable futures. The limitations of instrumental rationality, as well as the inherent complexity of the task, mean that new approaches are needed. One might be to commission creative artists to construct images of such futures.

I continue to believe that the central concerns of the futures field are not trivial. So long as civilization continues they will remain important because we have present shared interests in working towards a peaceful, healthy and sustainable future. But the stakes continue to grow because we are embedded in systems which we hardly recognize, let alone fully understand. We do not know how to reconstruct a world view; yet that is exactly what current dilemmas imply. The latter are components of the breakdown, signs of exhaustion of a particular synthesis.

As we look ahead it becomes increasingly clear that technical innovation on its own is not the main issue. If we put our *current* technical capacities to rational use that would be an immense step forward. But they still tend to conceal primitive and irrational impulses which we have not yet learned to control or move beyond.⁵⁴ That is where superficial analyses come unstuck: rational argument about superstructural issues carries little weight unless it looks deeper.⁵⁵ It is at those deeper levels that the key shifts are occurring. Those shifts have to do with epistemological reconstruction and the *recovery* of meaning, value and purpose. Central to that process is a new (or renewed) view of the relation of persons to each other, to their world and to temporal process, past, present and future. No one could imagine this an easy task, but it is one in which the futures field is rightly, and heavily, engaged. That is why it requires, and will get, more support.

When people first approach futures they tend to bring with them the assumption that futures work is centrally about forecasting and prediction. This view is insupportable—the field is much wider and more diverse. That is one of its strengths. Another is its increasing conceptual sophistication. The naive attempt to 'know the future' in any hard sense, is fast disappearing. In its place a process-oriented and systemic view is developing; a view which recognizes that change and uncertainty are major constants and that

epistemological depth is as important as methodological rigour. As this shift works through the field it will change in unpredictable ways. Yet some consequences are already clear.

We have come a long way since the only available view of ourselves was one of separate and isolated beings, locked in futile conflict and competition and mocked by the dark immensity of the universe. As the underlying links become clear we see that we are richly interconnected with all things and events, with past, future and each other; with our parent's parents and our children's children throughout all time. By probing beneath the surface and recovering a deeper sense of involvement, of connectedness, we may also gain access to new meanings and purposes. In that process we may discover how to live more lightly, more wisely, in a shrinking world and an extended present.

Notes and references

1. E. Leach, *A Runaway World* (London, BBC, 1968).
2. Two overviews of this process are provided by R. Slaughter, *Birds in Bermuda* (Hamilton, Bermuda, Bermuda Bookstores Ltd, 1975); and D. Wingate, 'The restoration of an island ecology', in *Whole Earth Review*, 60, Fall 1988, pp 43-65.
3. L. Mumford, *Technics and Human Development* (New York, Harvest/Harcourt Brace Jovanovich, 1966/67).
4. The schizophrenic identity of a synthetic island paradise which is also an armed military outpost was explored in R. Slaughter, 'Delicate immortal meanings', in *The Gollancz/Sunday Times SF Competition Stories* (London, Gollancz, 1987), pp 25-41. The story is reprinted in R. Slaughter, *Recovering the Future* (Melbourne, Graduate School of Environmental Science, Monash University, 1988), chapter 12.
5. One of the prime examples is A. Toffler, *Future Shock* (New York, Bantam, 1971). In this best-selling work of pop futurism, technological change is portrayed as an all-powerful and external force which leaves people at the mercy of events. A more recent example is J. Naisbitt, *Megatrends* (New York, Warner, 1982, 1984) which collapsed multi-level processes into ten easy-to-digest trends via content analysis of newscuttings.
6. See H. W. Eldredge, 'Education for futurism in the United States: an on-going survey and critical analysis', *Technological Forecasting and Social Change*, 2, 1970, pp 133-148.
7. R. Slaughter, 'Towards a critical futurism', *World Future Society Bulletin*, 18(4), 1984, pp 19-25, and 18(5), 1984, pp 11-21.
8. J. Habermas, *Towards a Rational Society* (London, Heinemann, 1971) is perhaps the most accessible of his works. The term 'critical' was also used by Robert Jungk in an essay called 'Three modes of futures thinking', in G. Chaplin and G. Paige, editors, *Hawaii 2000* (Honolulu, HI, University Press of Hawaii, 1973), p 113.
9. See C. Belsey, *Critical Practice* (Methuen, London, 1980).
10. See L. Winner *Autonomous Technology* (Cambridge, MA, MIT, 1977) for a fine discussion of the active role advanced technologies play in shaping their environments and users.
11. Habermas, *op cit*, reference 8.
12. T. Peters, The nature and role of presuppositions, *International Philosophical Quarterly*, 14 (1), 1974.
13. Habermas, *op cit*, reference 8.
14. This is explored fully in Slaughter (1988) *op cit*, reference 4. The possible decline of 'progress' as an organizing principle is noted by R. Norgaard, 'Sustainable development: a co-evolutionary view', *Futures* 20(6), 1988, pp 606-620.
15. Slaughter, *ibid*, chapter 2.
16. *Ibid*, chapter 6. Also see, D. Michael and W. Anderson, 'Norms in conflict and confusion', in H. Didsbury, *Challenges and Opportunities: From Now to 2001* (Washington, DC, 1986) pp 114-124.
17. This was the intention of the course 'Alternative Australian Futures', mentioned below.
18. For example, P. Ehrlich, *The Population Bomb* (New York, Ballantine, 1969) characterized the 'population problem' in terms of crude numbers and supported the 'triage strategy' which involved leaving some countries to starve. E. Goldsmith of *The Ecologist* magazine

- took a similar view and advocated neo-fascist 'solutions' in *The Stable Society* (London, Ecologist, 1976).
19. I am grateful to artist/architect Richard Mochelle of Integrative Services, 5 Bettina Court, Lower Templestowe, Victoria 3107, Australia, for his permission to reproduce this illustration.
 20. I have explored the significance of 'integrative levels' of discourse in Slaughter (1988), *op cit*, reference 4, chapter 7.
 21. R. Slaughter, *Futures Tools and Techniques* (Futures Study Centre, Melbourne, Australia, 1987).
 22. Slaughter (1988), *op cit*, reference 4.
 23. See E. Boulding's fine overview of the theories of Fred Polak in, 'Futurology and the imaging capacity of the West', in F. Tugwell, editor, *Search for Alternatives* (New York, Winthrop, 1973), pp 76-101.
 24. R. Slaughter, editor, *Studying the Future: An Introductory Reader* (Melbourne, Australia, Commission for the Future/Bicentennial Futures Education Project, 1989).
 25. This theme is one of many in J. T. Fraser's rich and rewarding work *Time As Conflict* (Basle, Birkhauser Verlag, 1978).
 26. See E. Boulding, 'The dynamics of imaging futures', *World Future Society Bulletin*, 12(5), 1978, pp 1-8. Also reprinted in edited form in Slaughter, *op cit*, reference 24, pp 24-29.
 27. See M. Berman's illuminating discussion in *The Reenchantment of the World* (Cornell, Cornell University Press, 1981).
 28. One of the standard treatments of future discounting remains that by H. Linstone, 'Confessions of a forecaster', in H. Linstone and W. Simmonds, editors, *Futures Research: New Directions* (Reading, MA, Addison-Wesley, 1977), pp 3-12.
 29. See M. Hillegas, *The Future as Nightmare* (Carbondale, IL, Arcturus Books, 1967) for a review of some human implications of dystopia.
 30. Slaughter (1988), *op cit*, reference 4, chapter 2.
 31. D. Schon, *Beyond the Stable State* (London, Temple Smith, 1971) has a perceptive view of the 'uncertainty and anguish' caused by unwelcome change.
 32. The Institute for Social Inventions, 24 Abercorn Place, London NW8 9XP, UK, works explicitly to encourage such innovations.
 33. M. Waring, *Counting For Nothing: What Men Value and What Women are Worth* (Wellington, New Zealand, Allen and Unwin, 1988) is a fine example of penetrating scholarship which reveals biases in systems of national accounting which have for many years caused work carried out in the home to be marginalized. The 'recovery of meaning' involved here is a thorough reevaluation of household work and the roles of women.
 34. Department of Educational Research, University of Lancaster, UK, 1986.
 35. As above, 1985-1988.
 36. Graduate School of Environmental Science, Monash University, Melbourne, Australia.
 37. Centre for Applied Research on the Future, University of Melbourne, Australia.
 38. J. Schell, *The Fate of the Earth* (London, Picador, 1982), p 174.
 39. Fraser, *op cit*, reference 25, p 121.
 40. This point is explored more fully in Slaughter (1988), *op cit*, reference 4, chapter 1.
 41. W. McDermott has a series of papers on this theme. One of these is 'The quest for the perfect issue: why the future is always disappointing', paper presented at the First Global Conference on the Future, Toronto, Canada, 1980. Also see Michael and Anderson, *op cit*, reference 16.
 42. These considerations are covered in some detail in F. Fisher, 'Ways of knowing and the ecology of change', in proceedings of the 'Barriers to Change' conference, UNESCO Network for Appropriate Technology, University of Melbourne, 11-16 November 1987.
 43. See C. Taylor's discussion of 'work' in 'Hermeneutics and politics', in P. Connerton, editor, *Critical Sociology* (London, Penguin, 1976), especially pp 186-192.
 44. Beer spoke of the deleterious effects of unconscious submersion within surrogate worlds in a plenary session at the conference 'Future Focus: the Next Fifteen Years', reported in *Futures*, December 1986, pp 821-822. Also see N. Postman, *Amusing Ourselves to Death* (London, Methuen, 1987).
 45. M. Godet, *Scenarios and Strategic Management* (London, UK, Butterworths, 1987).
 46. See Slaughter, *op cit*, reference 21, pp 50-51, for a workshop method of dealing with tears about futures.
 47. W. Anderson, *To Govern Evolution* (New York, Harcourt Brace Jovanovitch, 1987); W. Harman, *Global Mind Change* (Sausalito, CA, Institute of Noetic Sciences, 1988).
 48. All of Wilber's books fully repay close attention. But see, in particular, *Eye to Eye: the Quest for the new Paradigm* (New York, Anchor/Doubleday, 1983) for what is perhaps the most comprehensive discussion of this important area.

49. 'Prep 21' stands for 'Preparing for the 21st Century'. It is an effort, led by futurists in the USA, to stimulate and support futures work in tertiary institutions around the world before the year 2000.
50. B. de Jouvenel, *The Art Of Conjecture* (London, Basic Books, 1967).
51. S. Gould, *Time's Arrow, Time's Cycle* (Cambridge, MA, Harvard University Press, 1987).
52. This is the general heading of part 2 of Slaughter (1988), *op cit*, reference 4.
53. T. Barr, *Scenarios for Australia's Future*, UNESCO monograph, (Melbourne, Commission for the Future, Australia, 1988).
54. See Slaughter (1988), *op cit*, reference 4, for a full discussion of this point in relation to the nuclear weapons issue.
55. For examples see the popular US magazine *The Futurist*, World Future Society, Washington, DC.