



## WITH BOTH FEET PLANTED FIRMLY IN MID-AIR

### Reflections on Thinking about the Future

How is it that, when I reflect on over 23 years of sharing thoughts about the future, I really cannot convince myself that I know why I was right sometimes and wrong other times? Indeed, often I cannot clearly decide whether I have been right or wrong! Inadequate documentation contributes to this but there are other far more profound reasons for my retrospective malaise. What follows recounts some of what I have learned about thinking about the future and about the appropriate use of such thoughts. In 1963 I wrote:

*“[Thinking about the future] is not a scientific exercise based on consistent theory and heavily documented by field studies and laboratory research. No such theory exists for describing our society accurately—much less for predicting changes in it... Data are by no means trivial but in themselves they are seldom uniquely interpretable in terms of the range of conditions explored ...”*<sup>1</sup>

Today, as then, all we have are endless fragments of theory that “account” for bits and pieces of individual, organizational, and economic behavior. But we have no overarching or truly interconnecting theories, especially none that accounts for human behavior in turbulent times.<sup>2</sup> Economic theory is an acknowledged shambles.<sup>3</sup> Social and psychological theories are so inept that their formal status in political rhetoric is nil and, with a few notable exceptions, their uses in the planning and governance processes are more relegated to appendixes than to basic designs and programmes.<sup>4</sup> Most dismaying, even when we think we know the “true” explanation and have an ideal programme for overcoming or attaining a state of affairs, we do not

have formal theory indicating how to implement it.<sup>5</sup> That we are unable to correctly predict birthrates embarrassingly epitomizes our ignorance about the interconnectedness of micro and macro processes in the human realm.

It has become increasingly clear to me that overcoming the footless status of futures studies is a far deeper problem than that of closing the gap between data and theory about human behavior in turbulent times. At root the problem is epistemological.<sup>6</sup>

## Epistemological Problem in Futures Studies

To begin with, we simply have no way of resolving through cause-effect concepts “the great man in history question”: do great men (or events) make history or does history make great men? All futures studies embody this epistemological fog wherein stumble ghostly images about the “momentum” of social “forces” and about the timing and magnitude of shifts in “direction” introduced by persons or events.

If one subscribes, as I do, to Polanyi’s arguments, creative human activities have an emergent quality: the “whole” is unpredictably “greater” than the sum of the parts.<sup>7</sup> This seems obvious in the conduct of art, science and politics, and in interpersonal relations. One cannot predict a new theory or art form, nor new political and personal developments from what has gone before. Nor can one predict the consequences of predictions about consequences.<sup>8</sup> After the new state of affairs has emerged interpretations arise that purport to relate causes and effects so as to connect the new condition to what preceded it. But *not* before.

What is more, events, treated as causes or effects, are discrete only if we do not examine them too closely. We choose to identify the beginnings and endings of events by one or another habitual, mythical or professional convention. But everything we experience, especially in an information-dense world, tells us that, individually

and collectively, the human condition is overdetermined: everything causes, effects, and is part of, everything else and, in turbulent situations, sensitivity analysis can only refer to a fragment of a moot reality and it may well have already changed.<sup>9</sup> Whatever their individual limitations, the endless proliferation of contending fragments of explanation and the multiple levels of analysis and synthesis they imply amply attest to multiple “causality” and “effects” when it comes to the human condition.

In this regard a fundamental insight for me has been— there are *many* pasts.<sup>10</sup> Alternative choices of events, time periods, interpretations and intentions provide unnumbered ways to link past events to a present. And there are unnumbered ways of putting together the present, i.e. what is “really” happening and what is “really” important. Since the present is always constructed out of a presumed past, I have learned that thoughts about the future derive from preferred constructions of the present and of the past. These constructions are preferred because they are deemed “fitting” in that they seem, according to the prevailing social construction of reality and its cultural norms, to be sensible, familiar, logical, authoritative, or otherwise acceptable because one has participated in their creation. To be sure, wild cards are included in some thinking about the future, but it is not an accident that such events are suffused with the unacceptability that accompanies the semantics of “wild”.<sup>11</sup>

Since multiple pasts and presents make it impossible to bound events definitively as the “containers” of causes and effects, futures forecasts become questionable with regard to what is becoming what out of what. However, fuzzy realities elicit psychological and ideological discomfort: few will create or respond to such future descriptions. Instead, we arbitrarily and habitually (i.e. fittingly) perceive the world as strings of discrete events delineated by anticipatory and retrospective expectations



about what “is” an event. We construct (not necessarily consciously) our reality, and then construct our response to that construction—and so on into the future.<sup>12</sup> This is an aesthetic enterprise more than a logical one, even though some techniques used to further the aesthetic endeavour use logic, words etc.<sup>13</sup>

The pronouncements of experts are useful, when thinking about the future, not because their information is based on esoteric and valid knowledge about social change, though that occasionally may be so (but how is one to know?), but because, by virtue of the authority with which they are endowed, i.e. as *experts*, they are able to influence the definition of social reality others hold. Their expertness resides not in a prescience their logic engenders but in the “psychologic” that logic activates: the *authority* of logic and, therefore, of the expert as a practitioner of logic, is what carries weight. This source of authority legitimizes the stories they tell. But the source also tends to subvert the storytellers’ own recognition that they are telling stories. Their own belief in their authority, i.e. the authority of logic, leads them to believe they are doing something very different from “merely” telling stories.

Over the years these insights and learnings have led me less and less to the *doing* of futures studies and more and more to questions and understandings regarding the *functions* futures studies perform, or could perform.

## Role of Values and Beliefs

As I describe what I have observed about some functions served by futures studies and why are they used or not used, I must first acknowledge that the categories and processes which I describe imply a theory of social change and stasis only some of which is apparent to me. My comments about the epistemological and theoretical footlessness of futures studies also apply to my observations.

I emphasize some less well recognized, though nevertheless crucial ways in which thinking about the future affects individuals as individuals and as members of groups, as participants in organizations and in society. Futures studies serve other functions too but they are better understood or at least more acknowledged than those served at the all important individual level.

I believe that all who create and use thinking about the future do so on the bases of values and myths about what is real, valuable and meaningful. Whether a future study is used, misused or ignored, depends on the producers' and consumers', or anticonsumers', values and beliefs both as these express themselves consciously and through unconscious psychodynamic processes. I have come to believe that self-consciousness about these extra-rational—and sometimes irrational—contributions is fundamental for more effective creation and use of futures studies that are intended to encourage a humane world. How these extra-rational and irrational factors affect the creation and use of futures studies is now my preoccupation.

In the face of imposing intimations of a turbulent and problematic future, the existence of a future study, the very fact that one can be done, provides a kind of comforting talisman, a protection against the unknown. The study comforts by carrying into the future meaning based on what is supposedly happening *now* by using words and concepts that reinforce fitting images in today's society, words such as "economic", "age distribution", "growth rate", "corporation", "national security", "self-interest", "profit", "technology". These ideas, these words, just because they are familiar, offer a comforting sense that, indeed, the map *is*



the territory—that behind all the current turbulence there are real, enduring processes and circumstances at work that can be counted on into the future. For those so moved, it can then seem plausible that the future can be controlled. Consequently this anticipation bolsters a sense of self-confidence.

This sense is further reinforced through the “fitting” methodologies often used to create futures studies—logical process involving mathematics, models, data, numbers, graphs etc. There is also “expert” input which implies control over the subject matter which, in keeping with the dominant Western mythology of the past 300 years, implies the promise of control over events.

That the consumer of futures studies is able to commandeer the combined resources of logic and expertise itself engenders a comforting sense of being in control thereby reducing anxiety about the unknown future.

Commissioners of futures studies are also comforted and reinforced in their sense of competence because they see themselves doing what *rational* persons *ought* to do, i.e. use logic and expertise to solve a problem. Of course, this implied rationality also comforts some of those who are dependent on the actions of the futures studies’ sponsors. (Note that in other times, even as today, leaders and their followers were comforted and confirmed in their sense of competence when preparing for the future by doing such fitting things as praying, giving valuables to their “church”, doing good deeds etc. Faith, rather than rational procedures, provided protection from the unknown. Today, politics is a popular means for seeking protection from an unknown future.<sup>14</sup>)

These satisfactions provided by futures studies typically accompany ritual affirmations of a culture’s mythology. This does not make these ritual acts and their satisfactions bad or wrong. Rituals contribute essential stabilities to society. Of exceeding importance, to the extent that rituals comfort

and affirm, they encourage conduct compatible with them. Thus we have a situation in which extra-rational norms and sometimes irrational needs encourage rational behavior. And all this pertains, too, to the functions thinking about the future perform for those who create the futures studies.

In addition to these satisfactions there are other rewards for people who create futures studies. Doing so encourages the belief that one is influential, making a difference, being socially potent and powerful. These beliefs may be justified or they may well be demolished when nothing happens to the product, or if it is misused. But while his or her work is underway, I have yet to meet a “futurist” who didn’t feel socially significant and personally vitalized by visions of potential effect amplified by the perceived status of the study commissioners. Often enough these beliefs and visions are inflated by the promotional exertions of authors, organizations, and publishers competing for the rewards of profit and status bestowed by growing numbers of consumers of thoughts about the future.<sup>15</sup>

I have also learned that, much more often than not, futures studies increase discomfort because they expose the recipient to the problematical ramifications of the future. Ambiguity and uncertainty more typically result in anxiety and feelings of role impotency or loss of control. In turn, this state of mind activates psychodynamic responses that are not socially constructive.<sup>16</sup> One such response is to fix on or promulgate one or another future that reduces anxiety by gratuitously avoiding or deprecating the ambiguity and uncertainty—what is called “denial” in the psychodynamic realm.

To be sure, other motives, not all of them unconscious, contribute to these responses. Seldom are they exclusively the consequences of denial: earlier I described human behavior as overdetermined. But many experiences, discussions and probings convince me that futures studies often elicit such unconscious psychodynamic processes.

When confronted with the ambiguity and uncertainty which is the message of many futures studies, these processes serve to protect one's image of oneself as a capable person able to control the circumstances for which one is responsible.

Thus, we now have some futurists and their followers proclaiming that we are at a stage where, whether it be the result of evolution or Ilya Prigogine's dissipative structures, we will inevitably emerge into a transformed, better world. That not all turbulence results in higher order systems, that legions of dead species once were vigorous, that denial is a frequent psychodynamic response to anxiety-provoking information—all are overlooked by believers unable to live with more problematic and threatening futures.

Thus, too, we have futurists and their followers who deny that there is anything seriously wrong with the world, that technology, good management and the operation of immutable laws of economics will straighten out present kinks and reward present purposes, and that those who claim otherwise are gloom-and-doomers possessed of a state of mind that smacks of sin (and might even be unpatriotic).

Of course, these two groups of futurists do not by any means exhaust the class. Many of us are able to steer a course between these extremes or navigate in different waters making less threat-denying contributions to our clients' and audience's perspectives, anxieties and enthusiasms.

I have learned that futures studies also elicit psychodynamic processes because they challenge the status quo regarding what is being done, how it is being done, and whether to continue a course of action even if it is now rewarding. In 1973 I began emphasizing that one of the chief contributions of futures studies is to temper our satisfactions with how far we have come by exposing how far we have yet to go, thereby drawing attention to the ethical and operational sufficiency of present actions and policies.<sup>17</sup>

However, each of us harbours conflicting values, which our unconscious and our culture help us avoid recognizing most

of the time. Therefore, a communication that, on the one hand, may well heighten one's anxiety over uncertainty about which future will eventuate and, on the other, heightens one's anxiety about where one stands ethically with regard to those futures, is likely to elicit strong emotional responses. While futures studies can enlarge the sense of the variety of win-win opportunities perhaps residing in futures, for many they threaten to raise acutely discomfoting issues about "What am I entitled to?". In response there is anger, fear, denial—rejection of the study.

The complex and unavoidable interplay of rewards and threats with which futures studies face their creators and consumers leads me to see the functions they serve for the individual and the responses they elicit as those accomplished by *storytelling*, that age-old device by which humans have inspired, influenced and engaged each other.

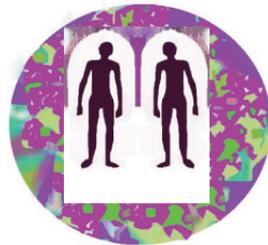
## The Futurist as Storyteller

In what follows, I recognize that futures studies styled as scenarios embody at their best much of what I shall urge.<sup>18</sup> But even scenarios seldom take all the advantages of storytelling that are available to them. In what follows, my intent is to tell a story within a story, so to speak, not to establish the logic and norms for doing so.

Nor am I demeaning the usefulness or appropriateness of telling some stories about the future in the style of a technical report, with its logical and normative constraints. These are not necessarily cynical devices for misleading anyone about the truth any more than is a story about human reality told in the sonnet form or painted impressionistically. These are the chosen methodological constraints within which the artist creates realities. The same holds for thinking about the future presented in the form of a story expressed within the constraints of a technical, logical study. But what is being *told* is still a story and it could be a richer

story if it were recognized and accepted as such. Answers to the question, “What does the future hold?”, that are couched exclusively in rational terms or legitimated in such terms are, at best, only partially satisfying because even the most logical person is only so in part. Here lies a large current limitation in the appeal of serious futures studies in contrast to journalistic exercises which, while substantively questionable, appeal because they are emotionally satisfying. However, *their* limitations are seldom recognized by their enthusiastic readers.

All worthy stories are first and foremost occasions, mirrors and contexts for learning about self by drawing one both inwards and outwards, by expanding one’s sense of the plausible. By learning about self one learns about others, for one always sees others through oneself. Thoughts about the future, by the very expansion of context they provide, offer their audience a larger mirror for viewing themselves—a larger mirror, then, for viewing the world and their part in it. Accepted as a story, the range of what is “fitting” can be enlarged because a story need not be constrained by the canons of fittingness that apply when a communication is treated as if it were exclusively an objective report undergirded with the theory and bolstered by data.



### *Methodological injunctions*

Three methodological injunctions emerge from this vision of the competent and responsible teller of stories about futures. First, shared thoughts about the future ought to include the acknowledgment that, as with the multiple and problematic nature of the futures explored, so too with

descriptions and interpretations of the putative past and present from which the futures derive.

Second, shared thoughts about the future ought to be accompanied by an explicit theory about the processes of social change sufficiently detailed so the futures described can be derived from it. If there is no such explicit speculative or tested theory, this ought to be acknowledged. Then both producer and consumer of the story can be more alert to the nature of the tacit and possibly questionable assumptions they hold regarding social change and human nature.

In urging these alternative explicit stances I do not deprecate the contribution of those talented storytellers about futures who sometimes know without knowing how they know—a state of mind the renowned physical scientist and philosopher, Michael Polanyi, used as the basis for elaborating his ideas concerning emergence.<sup>19</sup> I would argue only that the creator of such a futures study is obligated to share the fact of this mind-state with the consumer so that both can make the most imaginative use of a story built in part or wholly on intuitions.

Third, all involved should be vigorously aware that thoughts about the future unavoidably engage both constructive and destructive unconscious needs and images that influence conscious evaluations of purpose and pragmatism. Thereby, these unconscious contributions critically affect the destiny of the futures study. Collusion in the dangerous illusion that one's beliefs and choices can be determined exclusively by rational considerations will gratuitously defeat worthy intentions.<sup>20</sup>

### *Crucial morals*

A worthy and well-told story always implies a moral and stories about the future are especially well suited to convey some crucial morals. One moral meeting emphasis is that the nature of the future world will be an expression of emotions

at least as much as of rational deliberations, programmes and practices.

Emotions are critical to what happens—both those emotions driving creativity and reason, aspiration, power, greed and the will to control; and those emotions struggling with the existential questions of being human. As Seymour Sarson summarizes them, they are: “How to dilute the individual’s sense of aloneness in the world; how to engender and maintain a sense of community; and how to justify living even though one will die.”<sup>21</sup>

Another moral would have it that the future is this splintered civilization’s most available and useful context in which to face the personal question: what it is worthwhile to be and to do.

It is not enough to share thoughts about the future restricted to a description of the costs and benefits of introducing one or another new technology, policy or procedure to better realize the intentions of a public or private organization. Somewhere in the process the recipients of the study should be inspired to ask themselves, “What is it all for? Why give thought to the future? Surely not just for profits, or jobs, or the next election or budget hearing. These are very important, of course, but, really, what is it all for? Why am I doing what I am?”. If stories about possible futures do not elicit such questions and reflection, where will they come from? And who better to brood on these questions than those who commission or must respond to these thoughts about the future?

Yet another moral: in an uncertain turbulent world, beset with such heavy burdens and challenges as we face, a precondition for a humane future—perhaps for any future at all—is that those who create and use futures studies become compassionate learners. By compassion I mean recognizing that:

(i) In the face of crucial issues nobody, including oneself, really knows what they are doing, certainly not in terms of the *consequences* of their acts;

(2) everyone is, to some profound degree, living in illusions, believing in the “factness” of what comprises their world instead of recognizing that we live in an arbitrarily, though usually not consciously, *constructed* social reality; and

(3) everyone is in one way or another struggling to cope with three existential circumstances that Sarason emphasizes. This means, then, that everyone needs all the clarity they can muster, regarding their ignorance and finiteness, and all the support they can obtain in order to face the upsetting implications of what their clarity reveals to them. A compassionate person is one who, by virtue of accepting this situation, can provide others as well as self with such support.<sup>22</sup>

Well-told stories about futures can hardly avoid emphasizing the moral that resilient participation will require persons and organizations always to be seeking to learn what are the appropriate questions to ask about a changing and turbulent world and to learn *how* to discover and evaluate temporary “answers”. Acknowledging and experiencing the personal and organizational life of the learner depends on being open to unfamiliar ideas and experiences and on being increasingly interdependent. Both requirements demand exceptional degrees of vulnerability. But being vulnerable can lead to a humane world only if the norms of compassion are practised. Otherwise, those willing to risk a learning stance will be destroyed by the power hungry and hostile. Learning how to establish such norms will be as difficult as it is unavoidable and this, too, becomes a moral of futures stories.<sup>23</sup>

There is one more moral to the story I am telling here and to the stories I propose be told by futures studies. I have learned that all these morals hold as well for the *authors* of futures stories. We are not outside the story we tell: each of us is part of the story. Each must be a quester after existential meaning, vulnerable, uncertain, and ethically concerned about what happens to our thoughts about the future since, if



they are used, they will affect the future we are telling stories about.

The Delphic injunction, “Know thyself”, is the most essential of all conditions for meaningful and responsible engagement when thinking about the future, for finding one’s way among the claims, distortions, feelings and fantasies that each of us harbours in our unconscious. Constructive and destructive unconscious needs drive “futurists”—myself included—as well as the consumers of futures studies. To be indifferent to the fact or impact of these circumstances in ourselves is to forgo crucial insights into our functions and responsibilities as the creators of futures studies.



### **An Unfolding Story...**

WHAT I’ve learned about thinking about the future is, of course, not the whole story. There are always stories within stories that, if told in the words of another storyteller, could emerge and take over. And there are stories that surround any given story which, when told, change the meaning of the story within. This is life and it is precisely the value of a story, acknowledged as such: it draws much more out of the audience and out of the world than does a story presented as something else—as a “logical”, “scientific”, “value-free” report, for example. So too herein.

Therefore I don’t doubt that telling this story about what I have learned about the story telling we call thinking about the future, will change the story I tell... some time in the future.



## Notes and References

- 1 D. Michael, *The Next Generation: Prospects Ahead for the Youth of Today and Tomorrow* (New York, Random House, 1965).
- 2 If one needs any evidence that it is beyond our conceptual capabilities to cohere all the different worldviews, preoccupations, reports, forecasts etc. into anything remotely resembling a unified picture from which rational encompassing interpretations and decisions can be made, let him or her peruse any edition of *Future Survey*. The issue of 6 (4), April 1984 provides an especially representative sample of the swamp of ideas into which we are sinking ever deeper—with the help of the information revolution (about which there are, in this edition, two important critiques reviewed by the editor).
- 3 Whole issue, “The crisis in economic theory”, *The Public Interest*, special edition, 1980; N. Georgescu-Rogan, *The Entropy Law and the Economic Process* (Cambridge, Harvard University Press, 1971); V. Leontief, “Academic economics”, *Science*, 217, July 1982, pages 104-107; H. Striner, *Regaining the Lead* (New York, Praeger, 1984).
- 4 A. Mazur, “Evaluating the social sciences”, *Science*, 216, May 1981, page 875; S. Koch, “The nature and limits of psychological knowledge”, *American Psychologist*, 36 (3), March 1981, pages 257-269.
- 5 H. Rittel and M. Webber, “Dilemmas in a general theory of planning”, *Policy Sciences*, 4, 1973, pages 155-169.
- 6 R. Unger, *Knowledge and Politics* (New York, Free Press, 1975); I. Mitroff and R. Killman, *Methodological Approaches to Social Science* (San Francisco, Jossey-Bass, 1978).
- 7 M. Polanyi, *The Tacit Dimension* (New York, Doubleday, 1966).
- 8 N. Cochran, “Society as emergent and more than rational: an essay on the inappropriateness of program evaluation”, *Policy Sciences*, 12, 1980, pages 113-129.
- 9 R. Bauer et al, *Second Order Consequences: A Methodological Essay on the Impact of Technology* (Cambridge, MIT Press, 1969).

- 10 No other mode of cognitive exposure has so informed me of my ignorance about past, present and future, and my epistemological footlessness, as has exposure to histories of ideas and societal change. This continues to be a source of dismaying and exciting shocks to my emotions as well as to my intellect. Most informative for me, regarding many issues I am exploring here, is H. Arendt, *The Human Condition* (Garden City, Doubleday, 1958). Also high on the list are: H. David, "Assumptions about man and society and historical constructs in futures research", *Futures*, 2 (3), 1970; A. Toynbee, *A Study of History* (New York, McGraw Hill, 1972); F. Wyatt, "The reconstruction of the individual and of the collective past", in R. White, ed, *The Study of Lives* (New York, Atherton Press, 1963).
- 11 Here are three personal examples of different kinds of unfittingness: (1) the then president of the Brookings Institution was very unhappy about the report I prepared under its auspices for NASA (D. Michael, *Proposed Studies on the Implications of Peaceful Space Activities for Human Affairs* (Washington, DC, Brookings Institution, 1965), because I discoursed on the implications of discovering intelligent extraterrestrial life. Most unfitting, by Brookings standards of respectability; (2) some criticized my *The Next Generation, op cit*, reference 1, because I did not predict the future but instead suggested that things could go in different ways. A futures approach was not as fitting then as it is now; (3) in the 1960s it was fitting to speculate on the longer-run implications of automation and computers, especially the impacts on the workforce and privacy (see D. Michael, *Cybernation: The Silent Conquest* [Santa Barbara, Center for the Study of Democratic Institutions, 1962]). In the 1970s there were fitting ways to deprecate the issue and it essentially disappearing from futures speculations. Now, of course, the topic is real and it is hot... but as if the thinking of the 1960s never happened.
- 12 K. Mannheim, *Man and Society in an Age of Reconstruction*, Edward Shils, trans (London, Routledge and Kegan Paul); M. Novak, *The Experiences of Nothingness* (New York, Harper and Row, 1970); P. Berger and T. Luckmann, *The Social Construction of Reality* (Garden City, Doubleday, 1964); G. Vickers, *The Art of Judgment* (New York, Basic Books, 1965).
- 13 D. Michael, "Technology assessment in an emerging world", *Technological Forecasting and Social Change*, 11 (1), February 1978, pages 189-195.
- 14 C. West Churchman, *The Systems Approach and its Enemies* (New York, Basic Books, 1979).
- 15 D. Michael, *The Unprepared Society: Planning for a Precarious Future* (New York, Basic Books, 1968), Chapter I.

- 16 D. Michael, "Reason's shadow: notes on the psychodynamics of obstruction", *Technological Forecasting and Social Change*, 26 (2), September 1984, pages 149-153.
- 17 D. Michael, *On Learning to Plan—and Planning to Learn* (San Francisco, Jossey-Bass, 1973).
- 18 P. Hawken, J. Ogilvy, P. Schwartz, *Seven Tomorrows* (New York, Bantam, 1982).
- 19 Polanyi, op cit, reference 7.
- 20 D. Michael, "Ritualized rationality and arms control", *Bulletin of the Atomic Scientists*, 17 (1), February 1961, pages 71-73.
- 21 S. Sarason, "The nature of problem solving in social action", *American Psychologist*, April 1978, pages 370-380.
- 22 D. Michael, "Learning from the future", *World Future Society Bulletin*, 12 (4), July-August 1979, pages 1-5.
- 23 That the human implications for the users of futures thinking have yet to be appreciated is easily evidenced by the number of organizations that apply some thinking about the future to their planning and strategy activities but then go on to perform in the same managerial style as before. See W. Halal, "Strategic management: the state of the art and beyond", *Technological Forecasting and Social Change*, 25 (3), May 1984, pages 239-261. I began writing about this interconnection in op cit, references 15 and 17, but it is only recently that multiple circumstances (in their usual overdetermined way) have begun to encourage some efforts to humanize management that truly responds to the story told in some futures thinking.

