FUTURES STUDIES COMES OF AGE: WHERE ARE WE NOW AND WHERE ARE WE GOING?

by

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INTRODUCTION

This is a special time for futures studies. In fact, the decade of the 1990s may be a turning point in its intellectual history. It has been a time during which futures studies has come of age, a time of consolidating past work, of building firm. foundations, of seeing the fulfillment of early promise, and of agenda-setting for new advances to come. Futures studies now has many of the features of a distinctive discipline-,or, more accurately, of a *multi*discipline. It has its own publications, organizations, and methodologies. Its practitioners increasingly share conceptual. and theoretical commitments, purposes, ethical principles, empirical research and scholarship, professional ideals, a sense of community as futurists, and a growing body of substantive principles and knowledge that can be placed between the covers of a book, that can be taught to others, and that can be put to practical use.

For example, in 1991 Peter Moll gave us his book on the Club of Rome and Allen Tough published *Crucial Questions about the Future;* in 1993 Eleonora B. Masini brought out her succinct Why *Futures Studies?;* and in 1996 Coates et al. gave us scenarios of American and global society in 2025 based on years of work evaluating forecasts in more than 50 fields, while Kurian and Molitor's two-volume *Encyclopedia of the Future* and Richard A. Slaughter's three-volume *The Knowledge Base of Futures Studies* brought monumental scholarly achievement to the futures field. During the decade of the nineties, we also saw the launching and early reports of a global, multi-year study of the 21st century known as the *Millennium Project* (Glenn, 1993; Glenn and Gordon, 1997; Gordon and Glenn, 1993); and the list goes on, too long to report here. Even Michael Marien, the editor of *Future Survey, who is* skeptical about claims of progress in futures studies, has recently said that "In time, the embryonic enterprise of futures studies may develop into something resembling an academic field of study or a discipline" (Marien, 1996: 364).

Indeed, it may. And it may do much more. Today, the standard university disciplines are deeply troubled and we futurists may have at least sorne of the medicine needed to cure what ails them. For example, a recent Report on the Restructuring of the Social Sciences says that the entire university system of balkanized disciplines is badly in need of reform (Wallerstein, 1996). The report argues that the rationale for the separate existence of the various social science disciplines makes little sense today and recommends that they be opened up by cross-disciplinary joint faculty appointments, by requiring graduate students to work in more than one discipline, and by forming interdisciplinary groups focused on specific themes or problems for limited periods of time (Wallerstein, 1996).

Futurists, of course, have the intellectual tools to play significant roles in such a restructuring of the university and in the revolutionary reorganization of knowledge that is already underway. For it is part of the coda of futurists to cooperate across disciplinary boundaries and to adopt perspectives that are holistic, issue-driven, action focused, value-relevant, and future-oriented-all of which encourage transdisciplinary work (Bell, 1996). Could futures studies, then, help lead the way in reshaping education for the 21st century?

The answer, 1 think, is yes, *if* we futurists respond to such a challenge by reaching out to nonfuturists, putting their doubts about futures studies as not

having acceptable intellectual credentials to rest. Three general topics seem particularly relevant to such efforts:

First, the recent advances in futurist discourse about the knowledge base of futures studies may bring one phase of development to an end, but surely they also begin a new one. For every field of inquiry faces the periodic task of examining its epistemological roots. Thus, 1 ask, what is an appropriate theory of knowledge for futures studies, one that will convince even the critics of futures studies of its solid philosophical base?

Second, because it is a source of confusion, especially in explaining futures studies to nonfuturists, 1 again raise the question of prediction. To some observers we futurists appear to be hypocritical because we deny that we make predictions while in fact we do so and then use a variety of euphemisms for the concept of "prediction" to describe what we do. Thus, what is the proper role of prediction in futures studies?

And, third, 1 discuss the futurist task of examining preferable futures. How can we do so in a way that invites plausible belief among scholars of other disciplines, especially in the face of the widespread dogma that evaluation cannot be objectively grounded? Can a futurist theory of knowledge be expanded to include objective methods for assessing the human values on which judgments of the preferable rest?

But before discussing these topics, let's briefly explore some future possibilities of a greatly enlarged futures field, fully funded and incorporated into established intellectual communities. What are some of the gains and losses of futures studies becoming an essential part of the teaching and research of most colleges and universities everywhere?

FUTURES STUDIES AS A FULL-FLEDGED PART OF THE UNIVERSITY

Let me begin with a story. Some years ago, a young Assistant Professor in the Yale Biology Department, Sidney Altman, was beginning what appeared to be a promising career. He received outside grants to fund his research, he had a thriving laboratory, graduate students wanted to work with him, the major biology journals published his papers, he received offers from other universities to come lecture and inquiries about his interest in joining their faculties. The world looked good.

But his research took him along trails less-traveled and led him outside the boundaries of the matrix of biology as then understood. As he followed these trails, Altman's world began to fall apart. His grant applications were rejected, he had trouble keeping his lab going, both major and lesser journals refused to publish his papers, and he was told that what he was doing was uninteresting, factually wrong, not meaningful, or, frankly, a bit wacky.

Altman became desperate. He was anxious and miserable. Finally, he prevailed upon an older, highly respected faculty member to communicate his paper to a mainstream biology journal. After all, Altman was from a major university, had funding from respectable sources, had run a properly controlled laboratory, and had satisfied the demands of proper research procedures. The older faculty member had the paper reviewed and was successful in getting the paper published in the *Proceedings of the National Academy of Sciences.* Please note that it took the personal intervention of an eminent scientist to get the paper published.

Not too many years later, Sidney Altman's world was good again, because the research he reported in that early paper (on an enzyme with a catalytic RNA subunit) in 1989 won him a Nobel Prize in Chemistry.

The story is instructive for several reasons. First it illustrates that at any given time the leading figures and gatekeepers of an entire discipline can be wrong in their judgments about what is good or bad, trivial or important work.

Second, it illustrates that a community of scientists can right itself and in considerably less time than the 359 years it took the Catholic Church to officially admit that Galileo was right and that the Earth was not the center of the universe. Despite their initial negative reactions, Altman's colleagues did eventually recognize and honor his work.

Third, it illustrates at least one of the reasons some of us became futurists. Exasperated with the close-minded, conventional thinking within the mainstream disciplines, the reluctance of many professors and university administrators to accept a new idea, and facing pressures to conform intellectually within our disciplines, we sought an intellectual home where original and creative thinking were served by something more than pious propaganda.

Also, the dominant views in the major disciplines at the time appeared irrelevant to many of the problems confronting humankind, while futures studies beckoned as a form of inquiry distinctively focused on human betterment. Moreover, too often, the dominant disciplines took rather broad-minded students and converted them into narrow, one-dimensional, discipline-focused, amoral careerists (Linstone, 1989: 6).

In reaction, many of us joined the futures movement and became part of the recent trend under which the practical application of knowledge began to move outside the university. Yet some of us with university appointments were able to design a futures course or two, a few of us were able to establish institutes or centers of futures studies, and a very few of us succeeded in getting university approval for degree programs.

But the Altman story gives us hope for change. Good and right ideas may prevail. Futures studies could become an essential part of the core curricula of most colleges and universities. We don't have to look back far to see precedents for change. In the United States, for example, since the 1940s international and area studies programs flourished, and, starting in the 1960s, new programs and departments of African American studies and ethnic studies were introduced which were soon followed by new women's studies programs. Like futures studies, these new university units, along with new programs in social policy, were transdisciplinary and tended to focus on basic issues of human concern. Unlike futures studies, however, they did not undertake a full scale study of the future. Thus, the future remains inadequately served by the intellectual establishments of our day.

Can futurists during the next thirty years successfully manage the transition to fullfledged acceptance and incorporation into the intellectual and academic mainstream? It will take many of us in different academic settings in many countries to, do so. It may require us to give up the role of the intellectual maverick, to stop trying to shock our colleagues with outrageous and contrarian views without plausible grounding, to establish professional criteria that can and will be used to, reject some papers both for presentation at our meetings and for publication in our journals, to agree on standards of evidence for our assertions, to codify the principles of futures thinking more fully so they can be routinely taught, to create a standard core curriculum for the training of new futurists, to enunciate and enforce professional standards of conduct in dealing with clients, and to democratize our professional organizations (as has already been done in the World Futures Studies Federation under the leadership of Pentti Malaska, Tony Stevenson, and others).

The risks, of course, include the possibility that the innovative futures work of some future Sidney Altman will go unrecognized, unheeded, and unrewarded. Turning passion into ritual; unbridled intuition into controlled convention;

exceptional talent into shared training; and the rhetoric of alarmism into responsible solutions have their costs. Yet if we believe that futures studies can make important and distinctive contributions to the well-being of future generations and the life-sustaining capacities of the Earth, then, we have no choice but to do everything we can to bring intellectual and academic respectability to futures studies and to cap its present coming of age by accepting the burdens of responsible leadership. For that is how futurists will get the sustained and dependable resources that they need to develop futures studies more fully and make significant impacts on the education of the young, on dominant world views, and on the important policy decisions of the day.

A CRITICAL REALIST THEORY OF KNOWLEDGE

The Problem

One of the major ills of universities today also affects futures studies. It is the near chaos of contradictory claims about what constitutes knowledge. It begins with the most recent revolt against positivism that can be dated by the publication in 1962 of Thomas S. Kuhn`s *The Structure of Scientific Revolutions.* The ensuing debate between positivists and antipositivists raged like a wild fire frorn the rnid-1960s to the 1990s, fueling burning dissent in discipline after discipline. Positivists were called superficial and naive because they looked only at the observable surface of things, ignored deeper truths, endorsed the status quo, were one-dimensional, and failed to ask deep questions. Antipositivists, in turn, were accused of talking nonsense in high-sounding language, hiding trivialities in a maze of obscurities, thinking unclearly, and being "an Army of verbiage-intoxicated, pseudo-rebellious windbags" (Gellner, 1985: 6). The philosophy of science was undermined by "successive waves of hermeneuticists, structuralists, post-empiricists, deconstructionists and other invading hordes" (Crews, 1986: 36) who did their best to reduce the positivist theory of knowledge to ashes (Bell, 1997, vol.1).

As we all know, the modern futurist movement experienced a formative period of rapid development during the very time when this philosophical tumult in academia was taking place. As a result, futurists function with a mish-mash of sometimes contradictory epistemological views.

The situation in futures studies is even more complicated than in the mainstrearn disciplines because futurists necessarily face the additional task of justifying truthlike propositions about the as yet nonexistent and unobservable future that some scholars, both positivists and antipositivists alike, usually ignore or gloss over.

The Benefits and Limitations of Postpositivism

Certainly, the attack on positivism has had some beneficial effects, for example, in revealing errors of positivism, such as the uncritical acceptance of the results of modern science (Rosenau, 1992: 9). But postpositivist views, after a period of dominance, began to fall as they came under increasing criticism (Newton-Smith, 1981), especially for their claims of postlogical and postrational ways of knowing.

Pauline Marie Rosenau (1992) has added the final nail to the postpositivist—or more generally, postmodern-coffin. She disposes of postmodern beliefs as a viable theory of knowledge, demonstrating that they involve obscurities, contradictions, destructiveness, confusions, intellectual anarchy, pessimism, and the rejection of truth even as a goal. She demolishes the extreme postmodern claims that there is no causality, no determinism, no objectivity, no rationality, and no truth. She shows that, if we cannot get beyond postmodern beliefs, we might as well give up trying to know or understand

anything, much less trying to act intelligently on our knowledge (Bell, 1997, vol. 1).

The Solution?

Fortunately, a viable post-Kuhnian theory of knowledge is available. It is known by several names, most prominently as "critical realism"(Bell, 1997, vol. 1; Musgrave, 1993). It owes much to the critiques of positivism, and, more generally, to humanistic critiques of scientism. It recognizes that all science is to some extent presumptive and qualitatively judgmental in nature; that presuppositions are inevitable; that the historical context affects science (including physics); that science is a social process and that scientists are human beings (with all their faults); that the manipulation of events should have precedence over mere correspondence in time and space as acriterion of powerful knowledge; that social causality can and should be linked to people's intentions and purposes as well as to passively observed concomitancies; that knowledge is uncertain; and that plausibility is sometimes the best result that we can obtain. It acknowledges that science has a place for creativity, imagination, intuition, and insight, and it recognizes that many aspects of reality may always remain beyond human ability to observe and understand (Bell and Olick, 1989; Campbell, 1984).

But critical realists believe that how the world really is plays a decisive role in the achievements of science, that truth can be known within the limits of the human senses and intellect, and that warranted assertability is possible. Critical realists do not demand that the truth of a proposition be justified, but only that a person is justified in belleving that the proposition is true (Musgrave, 1993: 282). They give reasons for their beliefs and make serlous attempt to refute them. Following Karl Popper's fallibilism, they accept beliefs as warranted if the evidence supporting them remains unrefuted (Musgrave, 1993: 290). They believe that knowledge is conjectural and they allow for the possibility that conjectural knowledge may turn out to be false.

Additionally, one of the great attractions of critical realism for futurists is that it is a way not only of justifying beliefs about the past and present, but also of warranting beliefs about the future, that is, predictions. Thus, conjectural knowledge of the future is possible. As Peter C. Bishop (1994) has recently written: The future is not unknowable. Moreover, we know it in about the same way as we know the past and the present, that is, by using logical deduction.

THE ROLE OF PREDICTION

This leads me to a second issue: the role of prediction in futures studies. By "prediction," 1 refer to the shared meanings of anticipation, expectation, forecast, foresight, prevision, projection, prophecy, and other such euphemisms for "prediction." Clearly, some of these terms include special meanings not shared by the others, for example, "projection" often is understood as referring to predictions that are based on extrapolations from time series data. But other of these special meanings are not widely shared (Henshel, 1982). Thus, 1 use the term, "prediction," in a generic sense to refer to any statement or assertion about the future that deals with what may, might, could, will, or would happen.

Although there are some exceptions (Bardis, 1986; Martino, 1987; Vught, 1987), the majority of futurists minimize the role of prediction or rule it out almost entirely. Rather, most futurists agree that the purposes of futures studies include describing, understanding, and explaining alternative futures as well as consciousness raising, designing, evaluating, advocating, and even sometimes participating in the decision making and other social acts that will create the coming future.

To explain that prediction is not the main or sole purpose of futures studies to a public that tends to view us futurists primarily as crystal-ball gazers can be a daunting task, especially in an age that is not receptive to complex thinking and that oversimplifies everything into brief sound bites. Recently, 1 was interviewed by *George,* a fairly new, slick and glitzy popular magazine edited by John Kennedy. 1 spent a good part of the interview explaining to the interviewer that futurists were not primarily interested in prediction. Yet, when the interview was published, the author could not resist saying in the opening paragraph, "He who lives by the crystal ball must learn to eat ground glass." Otherwise, the interview itself was true to what 1 had said, but some editor hyped up the table of contents by identifying me as "the dean of the crystal-ball biz" and by adding a subheading to the interview by saying that 1 have "made a career of predicting the future" (Tenner, 1997). So, yes, 1 recognize the general public"s misunderstanding of futures studies and the annoyance that it causes futurists.

Yet many of the things that we futurists say we do actually do involve prediction. We futurists, as all people in their everyday lives, can and do-and often must-predict all the time, and we often do so quite accurately.

The denial of prediction is encouraged by, among other things, a fixafion on exactly those future events that are most difficult to predict accurately. If we predict that the next US presidential election will take place in November, then we have said nothing exceptional even if it turns out to be true. After all, we now know that it is scheduled. That is, we can-and do-predict thousands of routine events most of which will turn out to be true. Routines of repetitive behavior are an aspect of what social order is. We can predict when the bank will open, when the play will start, and when the restaurant closes. We can predict when the concert will begin, which side of the street drivers will steer their cars, and so forth, because such things are socially controlled, and we plan our trajectories through time and space according to, such predictions.

We predict with great accuracy that a wornan will not marry her father, that parents won"t eat their children, and that people won't micturate on their dinner table. Social life, indeed, is patterned and orderly under most circumstances. But such predictions are taken for granted precisely because they are so, certain (even though they may sometimes not come true: e.g., the outbreak of war might lead to postponement of the election; bad weather or maintenance problems may delay the departure of your aircraft, about 30% of the tirne as it turns out; and a car coming toward you on the highway might pull over into a collision course with you.)

But what is challenging is to make predictions about events that are by their very nature *not* socially controlled, especially when the outcome is important to, us. People must anticipate when and where the horse races will be held, if they intend to go to the track and place some bets, but what they really would like to know is which horses will win. Thus, if we focus only on the most uncontrolled and chancy events, then the conclusion *seems* to follow that we cannot predict.

In fact, predictions are a necessary part of decision planning, even in the everyday lives of ordinary people. Imagining the future, even if it is limited to the very near future of minutes, hours, or days, is how people make their way in the world. Prediction "is a routine human preoccupation inherent in all social behavior... Thus the decision to turn on a light switch is based on the expectation that the action will result in the illumination of a room" (Gabor, 1986).

Finally, to test the accuracy of a prediction by whether or not it turns out to, be true is often misleading as an indicator of the validity of a prediction. This is so, as all futurists know, because some predictions are reflexive, i.e.., they are self-altering. for example, the school board predicts that schools will be overcrowded within five years. But, learning of the prediction, the city council

builds new schools with sufficient space for all future students. The prediction turns out to be terminally false, but it was presumptively true at the time it was made.

Many-if not all-predictions, like this one, are contingent or conditional. They depend on a variety of assumptions, even though they are often unstated, many of which can change and some of which may be changed because of people's reaction to the prediction itself. The exploration of alternative futures is partly a matter of making a series of different predictions on the basis of different assumptions about conditions.

Prediction, thus, plays an important role in the futurist enterprise, even though the predictions (forecasts, projections, or whatever they are called) may be short-term or long-term, specific or sweepingly general, multiple, conditional, corrigible, uncertain, presumptively or terminally true or false, or self-altering and even though other futurist purposes eclipse that of prediction.

THE JUSTIFICATION OF PREFERABLE FUTURES

1 have been speaking, of course, about possible and probable futures, that is, truth-like propositions about what, under a variety of different assumptions, might be, can be, or will likely be at some future time. Let us turn now to another task of futures studies, the exploration of *preferable* futures. Going beyond studying the collective value judgments of respondents, 1 ask, how do we know what a good future is?

At any given time and place, the most general question about preferable futures, perhaps, is "what ought we to do?" To make such a decision, of course, we need to know where we have been in the past and where we are in the present, that is, our "initial condition." But we need to know more. We need to know, also, the future consequences of alternative actions, which is a prediction problem. And we need to assess those consequences as being more or less desirable, which is a value judgmental problern. Futurists have done a great deal of methodological work on the prediction problem, i.e., on forecasting, but they have done less to justify their judgments of preferable futures in equally objective ways.

Elsewhere (Bell, 1997, vol. 2), 1 try to show that the critical realist theory of knowledge can be used to test value assertions in much the same way as it can be used to test truthlike assertions about the future and truth assertions about the past and present. Building on the vast literature of utopian thought, the work of modern futurists such as Robert Jungk, and that of moral philosophers such as Keekok Lee (1985), we can assess the validity of propositions about preferable futures. Lee, for example, has proposed a method based, like critical realism, on Popper's fallibilism. She calls it "epistemic implication."

The logic underlying epistemic implication is straight forward. One assumes that prescriptive statements contain or rest upon some descriptive contents that can be tested. If the prescriptive statements depend on their descriptive components, then they are brought into question if their descriptive components are falsified. For example, make a value assertion, an "ought" statement. Then, give the reasons for it. If the reasons are false, then the original "ought" assertion is false also-or, at least, cannot be held on the basis of those false reasons. If the grounds or reasons are not falsified, then the "ought" assertion is not falsified.

By such a process, rival value judgments, conflicting "ought" assertions, can be eliminated. That is, it is reasonable to believe value assertions for which supporting evidence and grounds are unrefuted after serious efforts have been made to refute them. To the contrary, it is unreasonable to believe value assertions whose supporting evidence and grounds have been refuted. According to the critical realist theory of knowledge, scientific reasoning aimed

at falsifying or verifying both prefactual (i.e., predictive) and factual propositions are similar.

Lee gives additional criteria or requirements that reasons must meet and, when they are met, they provide warranted assertibility for value assertions. Simply put, her method includes making explicit and intelligible arguments, testing for logical coherence, looking for congruence or conflict with scientific assumptions and theories, and searching for relevant empirical data.

1 am well aware of the fact that most scholars and scientists, including both philosophers and social scientists, do not believe that it is possible to objectively test a value judgment. Yet, of course, they do it all the time. They do it when they grade their students' work, when they write letters of recommendation, when they evaluate papers for publication and research proposals for funding, when they evaluate applications for fellowships, and when they decide to hire or promote faculty members.

Let me give you one illustration. A colleague of mine who firmly believes that "ought" assertions cannot be supported or refuted by factual statements had been debating the issue with me for several years. One day when we had a senior faculty meeting where we were to decide whether to promote a junior colleague or not, he was unable to attend. Thus, he sent a letter instead. It began with the assertion: "We ought not to promote this person because. and then gave a series of reasons, all based unintentionally, helhad given an example of Keekok Lee's epistemic implicafion.

He cited the person's professional incompetence, paucity of publications, inferior quality of publications, inadequate teaching, low esteem in which the person was held by others in the field, the person's failure to help in any way in the administration of the department, refusals to serve when opportunities arose to help the community, and he gave detailed empirical instances at great length to support each of his reasons. His reasons were not refuted, and, indeed, the person was not recommended for promotion.

1 wish that 1 could say that when 1 pointed out to him that he had justified an "ought" proposition with factual statements that he immediately saw the light and repudiated his earlier position. No, that did not happen. But for the first time, 1 saw a slight gleam of understanding in his eyes.

CONCLUSION

In conclusion, as we face the beginning of a new millennium, futures studies is ready to move more fully into mainstream intellectual life, especially by the addition of futures courses, new and new departments of futures studies in colleges and universities. Such a move may require that futurists play responsible roles as citizens of universities and other educational institutions, participating judiciously and effectively in the give and take of campus decision making (just as Sidney Altman did when he served a term as dean of Yale College in order to strengthen science education). It is a propitious time for such an effort to do so both because futures studies has reached a new level of development and solid achievement and because futures studies has some solutions for the current ills that afflict many mainstream university disciplines, especially in the social sciences.

Yet futurists will face bitter political struggles, because the different disciplines are already competing for scarce resources and any new claims on such resources will require vigorous and sound justification. Such struggles may be diminished by futurists' efforts to tap new and different sources of funds, especially from donors who understand the importance of the spread of futures thinking into mainstream education. Such struggles, however, may be aggravated by lingering doubts about the worth and soundness of futures studies that exist in some university circles. In order to persuade our academic colleagues and admnistrators of our serious purposes and legitimate claims,

we futurists may have to rethink some of the foundations of futures studies so that they can withstand the critical scrutiny of others.

Toward that end, 1 propose a critical discourse among futurists on three important topics. The first concerns its theory of knowledge. Critical realisrn may be the most appropriate, because it can be used to justify beliefs in propositions about the past and present as well as propositions about the as yet nonevidential future. All such propositions are equally considered to be conjectural, yet bellef in each can be warranted. Also, critical realism goes beyond postmodernism and has respectable origins in the philosophy of science.

The second topic concerns the role of prediction in futures studies. Futurists-just as ordinary people-can and do make predictive statements all the time. Facing this fact, rather than denying it,would allow futurists to improve their craft through explicitly examining the processes of prediction and considering how belief in predictive statements can be legitimately and persuasively justified, not only to other futurists but to other scholars. It would also allow futurists to meet the "crystal-ball" view of futures studies headon and to show how the conjectural nature of propositions about the future produces very little ground glass to eat.

Third, until recently, futures studies has contained a methodologicalvacuum when it comes to the justification of preferable futures. Mostly, it has been filled, inadequately, either by a mere statement of the values of the futurist-investigator without any attempted justification or by an empirical study of the preferences of some relevant respondents (as in a Delphi study). Although they are better than nothing, these devices fail to objectively test the underlying human values on which judgments of the preferable rest. 1 have suggested that critical realisrn can do the job, thereby providing a unifying theory of knowledge for all of the information- seeking methods of futures studies, for all of its knowledge claims, and for its value assertions about what is a good and desirable future.

In carrying out what surely will be-and ought to be a continuing disputatious discourse within our futurist community, 1 trust that we futurists can reach some tentative ecumenical agreements that will allow us to avoid the chaos, fragmentation, and internecine warfare characteristic of some university disciplines today (Bell, 1996). The success of our efforts to carve out a new field and to create a greatly expanded futures studies may depend on our being able to develop a consensus about a cognitive core, just as it also depends on the cumulative growth of intellectual capital represented especially by skillful empirical studies that can serve as exemplars.

The desire for such expansion, of course, is not mere futurist chauvinism. Rather, it is based on the conviction that futures studies has distinctive and important contributions to make to human well being. With the understanding that all knowledge is to some degree uncertain, that there is much that we do not know, and that we ourselves might be wrong even about our most cherished beliefs, can we help guide humanity toward a better future by working together to spread and to establish the principles of futures thinking?

NOTE

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