Visions of Desirable Societies

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Loose Connections: A Vision of a Transformational Society

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OVER the past 15 years, during which time I have devoted myself professionally to the study of the future, I have almost evenly divided my efforts between either discovering and analysing what other people think the future will or should be, or determining and clarifying what I would prefer the future to be. I state these two activities as being separate because I have learned that what I prefer is not what many other people seem to want or consider possible. You can get a good estimate of the differences involved by comparing my preferred future, briefly indicated below, with other contributions to this volume. There are substantial differences.

Moreover, while I am by no means predicting that my preferred future will actually happen, I am describing what I believe to be a possible future. I am presenting a *eutopia* (a preferred real future, i.e. a good place), not a *utopia* (preferred but impossible future, i.e. no place). That is to say, I believe that there are trends and possible events which could lead to the future I prefer, and I am merely highlighting what I believe to be one possible set of consequences deriving from those trends and events.

There is no doubt that my preferred future is both highly personal and highly ethnocentric. It is a future which one might expect from a white, middle-aged, reasonably successful American university professor, though it is equally clear that most white, middle-aged, successful American university professors do not by any means adhere to it. Nonetheless, one would not expect my preferred future to come from the typewriter of a well-socialized Indian farmer, Nigerian bureaucrat, Sicilian peasant, Polynesian chief, or what have you — although it is possible that some one thus described might in fact like my preferred future even better than I do.

To call my future, "personal and ethnocentric", however, is not to condemn it, in my opinion. As you will see, the essence of my future is the assumption that we are more or less rapidly moving into a situation where more and more people in the world will find themselves in the company of

others who have genetic, linguistic, experiential, and expectational differences from themselves. That is to say, in contrast to the assumption I find underlying most of the papers in this volume, I believe that we are rapidly moving away from "community" and precedence-oriented living situations, and towards "individualized" and consequence-oriented circumstances.

Moreover, I believe this is happening globally, though obviously each section of the world will feel the impact of this trend differently. And just as some will feel it sooner (or are, as I believe, already experiencing it now — the US and some of Western Europe) so others (e.g. the People's Republic of China) might be able to avoid it entirely.

Theoretical Assumptions

One of the reasons futures studies is often considered to be an emerging art (not to say a pseudo-science) by persons uninvolved in it is because most writings about the future are so devoid of theoretical underpinnings. Presumably, one should not speak about the future unless one has first developed and specified a clear theory of a social structure and social change. Yet, most writings on the future either ignore the subject entirely, or offer only veiled hints as to what causes what to change and what does not change in human societies.

With such a statement, I should immediately launch into my own clear theory of social morphology, but, alas, I can do little better than the worse who have gone before me. I do wish to make a comment about my theoretical *assumptions*, however, because I believe that unless you understand them, you cannot begin to understand why I make the statements I do about my preferred future. Also, it should make it much easier for you to pinpoint and refute my errors if I can show you at the outset where I will subsequently be going wrong.

Figure 1 depicts an attempt I have made to analyse all of the various theories of social change that I am familiar with. It is unlikely that any one theory is correct, or wholly wrong. Rather, our understanding of social structure and dynamics is so primitive (and neglected) that it is likely not only that a complex combination of several of these theories is nearer the truth, but also that important factors have not been picked up by any theorist so far. It is also possible that we are humanly incapable of developing an adequate theory in this area, but I assume such is not the case.

Probably the most popular "theory" used by futures researchers is that which is operationalized by various forms of trend analysis: one's theory of social change (whether that theory is rigorously defined or only a hunch) specifies the factors in society which are most important (e.g. population growth, energy utilization, the proportion of the population in various kinds of occupations, etc.); indicates how to determine the growth (or decline) of that factor or factors from historical data; and then extrapolates

CHARACTERISTIC DISTINCTIONS BETWEEN THEORIES OF SOCIAL CHANGE
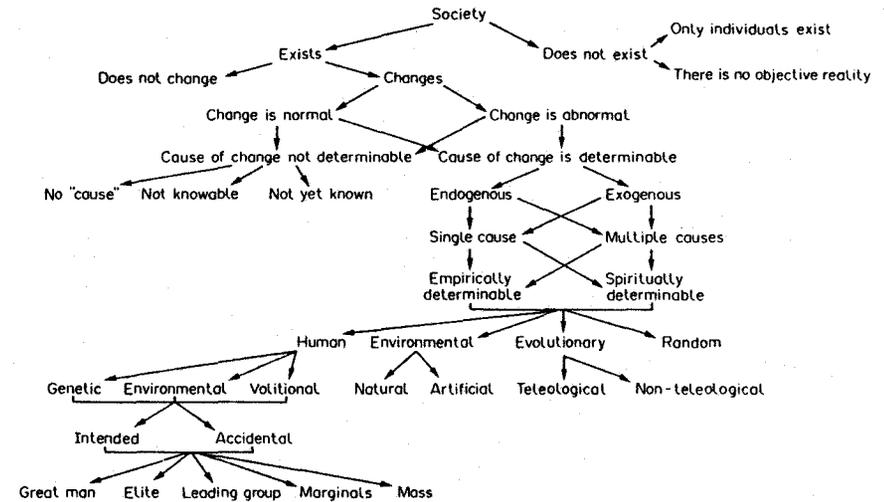
PATTERNS OF CHANGE: 1. Linear 2. Curvilinear (e.g. hyperbolic, exponential, logistic, etc.) 3. Cyclical 4. Envelope 5. Step 6. Dialectic 7. Stochastic 8. Random
SCALE OF CHANGE: 1. Individual 2. Communal 3. Societal 4. Cultural 5. Global 6. Extraterrestrial
HIERARCHY OF CHANGE: Movement → Change → Development
LOCUS OF CHANGE: 1. Endogenous change: Dynamic equilibrium; biological growth; "the social DNA"
2. Exogenously-imposed change: Disease; evolution; revolution; invasion; operant conditioning; education
3. Exogenously-sought change: Feedback, information, learning
ILLUSTRATION OF CHANGE *IN* THE SYSTEM VS. CHANGE *OF* THE SYSTEM: a. Stagnant pond; b. Flowing stream with standing-wave pattern; c. I step in the stream and change the wave-pattern temporarily; d. I dam the stream and permanently alter the flow and wave-pattern; e. I heat the stream and change water into steam and sand into glass. SO, WHAT IS CHANGE? I SAY BETWEEN "B" AND "C". Thus, even a waterfall doesn't "change" according to this understanding because the speed of change is not the most important factor; the stability of the system — the alteration of patterns of or within the system — is the point.

Also, there is the question of SCALE: The "stagnant pond" actually changes microscopically, and with the seasons. Similarly, the changes of the heated stream may be irrelevant, or small parts of another system when seen from the moon.

FIG. 1

the historical curve into the future, utilizing either simple linear regression or complex systems dynamics — or merely intuitive — techniques. Though they did not say so, I gather that many of the contributors to this book used such a method, explicitly or implicitly.

So have I, but with a certain twist to it. Out of the many factors that might be thought to shape the future, I have utilized only two — and then not rigorously operationalized them. First of all, I believe that Marshall McLuhan's statement, "We shape our tools and thereafter our tools shape us", captures a very important cause of social change. Hence, I believe that technology helps shape the future.

Secondly, I am persuaded that what sociologists call "age cohort analysis" — the studies of differences in attitudes and behaviours between human generations caused by differences in diet, child-rearing practices, significant commonly-shared social events, and the like — is also helpful for understanding what is not yet.

Now, in choosing these two to utilize in developing my eutopia, I am focusing on factors which tend to work against or break currently-dominant trends. This may be one reason why my future looks so different from that of others. Yet is seems to me that usual trend analysis, while valuable in many respects (for predicting the short-range future of a well-defined closed system), is not as helpful for my purposes (designing the long-range future of a poorly-understood open system). Thus, I am not interested in the future that normal trend analysis proports to reveal so much as in exploring what Theodore Gordon calls "the nature of unforeseen developments".

But let me be a bit more specific about how I intend to use technological/ societal interactive analysis and age-cohort analysis to illuminate my preferred future.

On technology

Currently, there seem to be three competing notions of the relationship between technology and society. The first, and most widely held, I call "mere technology" — the belief that "technology" designates simply the tools which humans use to enable them to do things. Technology refers merely to various types of hardware, nothing more. These tools have no special effect upon human nature, nor on what it means to be human, nor even upon the environment of humans. Of course, certain tools might be used in ways that humans feel are harmful. But this is only of trifling significance: once the evil has been identified, the problem can be corrected, either by changing the way the tool is used, by developing a new tool, or by reverting to some earlier mode of pre-tool usage. Technology is basically helpful to humans, and societies can be classified according to the primitiveness or complexity of their technologies. Generally speaking, the more complex, the better.

A second view, which has always existed but is currently gaining intellectual popularity, I call "dehumanizing technology" — the belief that technology is basically anti-human. Each culture has a collection of great myths which essentially says the same thing: technology is bad. It easily gets out of control. Technology is to be avoided. It is unnatural. Prometheus' fire; Pegasus' attempts to fly; Pandora's box. Shelley's Frankenstein, and the Sorcerer's Apprentice are merely a sampling of the cautionary tales in Western culture alone. Even the Adam and Eve story in Genesis One of the Bible has been interpreted as a warning against the original sin of linking human purpose with technological know-how in order to modify the perfectly-adapted Garden of Eden.

Thus, every increase in technological complexity is a step away from essential humanity. Small is beautiful. We are mere humans, always trying to play god through our technological mastery of nature, but only able to make things worse and worse until finally we develop a doomsday machine that will destroy us all. We must rid ourselves of technology, and live as simply as possible.

The view I hold is different still. For good or ill (and it may be ill), humans become humans and change the meaning of what it is to be human (i.e. change "human nature") in large measure by interacting with themselves and their environment through their technologies. The technological–human relationship is thus symbiotic and not parasitical. We may think that interrelationship is trivial, but in fact humans have been, are, and will be further changed by the interaction. We may think the interaction is demonic (probably because many of the changes which occur are unanticipated), but who we are now is largely a consequence of changes which occurred through past interactions, and it is dubious whether we should attempt to make the present immutable when its own characteristics are in part only the result of past interactions with technology which altered earlier human conditions.

In addition, it is doubtful whether certain types of technology are superior to others, *per se*. Small (or large) may or may not be beautiful. Scale is not the only criterion. It certainly does not seem likely that agricultural technologies — which wrought such incredible changes in human life thousands of years ago — are naturally superior to industrial ones. Is it more "human" to get up with the chickens than to get up with an alarm clock or a factory whistle? What is the inherent nobility in milking a cow twice a day every day of one's life, rather than tightening a screw on an assembly line forty hours a week? Why is a sabretooth tiger less dehumanizing than an automobile? And those questions are not made in defence of the moral superiority of factory whistle assembly lines or automobiles, necessarily. Rather, *all* technologies both restrain and liberate us, and we should evaluate them solely in terms of whether they help us live the way we wish to live or not, and whether we are so reactionary that we prefer the cer-

tainties of past technological arrangements to the uncertainties and possibilities of new ones.

I wish to make several more comments about technology. First of all, I am drawn to the definition which says simply that "technology" is how humans "get things done". This makes it easier to understand that technology is a good deal more than physical tools alone. Indeed, I find it helpful to distinguish between three types of technologies: biological, social and physical. The distinction I find important because often the question of whether a technology is "good" or "bad" revolves around whether one prefers a new physical technology to an established biological or social one. Figure 2 lists a variety of functions which have been, are, or perhaps will be performed by two or three of the modes of technology.

Type of Technology	Biological	Social	Physical
Function			
Communication	Extra-sensory perception	Spoken language	Television
Acquiring children	Sexual intercourse	Adoption Kidnapping	Test-tube babies
Food production	Mother's milk/ Wetnurse	Slave-based agriculture	Synthetic pills
Information transfer	DNA	School system	Learning pills
Killing	Strangulation	Voodoo	ICMB
Moving mountains	Manual labour	Faith	Bulldozer

Fig. 2

Generally speaking, humans have only recently developed powerful physical technologies which are capable of rivalling and replacing the older biological or social ones. A great deal of conflict over technological development comes in part, then, from not recognizing that technology consists of more than physical tools. But another important part of the conflict also comes from people who gain advantage from present technological arrangements, and who are loath to see the presently powerless made more powerful by newer technologies. Admittedly, a significant portion of the argument is also that modern technologies take power away from the already relatively powerless and give more power to the already relatively powerful. There are certainly instances where this is the case. But it is my belief that, overall and in the long run, more individuals gain more freedom in more areas of their lives through modern technologies (especially physical ones, but also social, and perhaps even biological technologies, if for example, "paranormal" abilities become more prevalent). Indeed, that in-

dividual freedom (as a fact of human experience and not merely as an intellectual concept) is in large part a (generally unintended) consequence of technological development is one of the most important contentions underlying my preferred future. While I am impressed by the arguments of such people as Ivan Illich and Jacques Ellul to the contrary, I am not convinced by them.

To put it extremely briefly, technological development shapes the future of society by (1) making possible human behaviour that was previously impossible, or making easier that which was previously difficult. Contrarily, (2) it makes unnecessary the previously necessary or highly likely. Thus (3) technological developments usually create choice where there was previously virtual inevitability. Hence, it changes, or at least threatens, established behaviours and values. (4) Since it creates choice where there was inevitability before, and since (while we may be able to do anything, we can't do everything) choices made frequently foreclose other opportunities, technological development also operates in a fashion contrary to that I have indicated so far. Thus, it may make impossible the previously possible; it may make necessary the previously unnecessary: and it may foreclose choice by creating inevitability. The critics of modern technology seem to feel that this latter is more nearly the true character of technology than that which I discern.

Let me make some final remarks about this point.

1. The way a specific technological development is introduced into a society; the local "software" (rules for use) surrounding the hardware; and the specific existential structure and values of the society into which it is introduced (or out of which it develops) all affect the way in which the generalized rules, outlined above, operate. Thus, assuming the general rules to be correct, we can at best only indicate the general tendencies of the technological development, not predict the specific resulting behaviour and values — not now, and perhaps not at all.

2. There are important differences between the social impact of specific pieces of hardware (e.g. a particular automobile); generalized types of hardware (the automobile *per se,* vs. other modes of transport, for example) and "levels" of technology (such as industrial technologies *per se* vs agricultural technologies, vs. hunting and gathering societies). It is much easier to indicate the general impact of a change from one level to another than it is to predict the impact of a specific piece of hardware — yet the impact of specific pieces of hardware is all that really happens. Indicating the probable impact of generalized types is in between the two in difficulty.

Inasmuch as I believe we are moving rapidly from an industrial to "post-industrial" technological system, I am discussing the implications of that shift in what follows, not the impact (say) of holographic television on Egyptian society (still less the consequence of whether that television is pro-

duced and distributed by Phillips or by Sony before or after an Arab–Israeli war!).

3. There is a difference between the social impact of the *invention* of a tool (whether invented by individual chance or by social research and development); the *development* of it (whether by entrepreneurship or by political decision); and its *diffusion* so that it has a mass impact through market and/or other modes of distribution. I am interested mainly in the impact of technology at the stage of mass diffusion.

4. Finally, methods of technology assessment attempt to distinguish between "orders" of technological impact: primary, or first-order effects; secondary, or second-order effects, and so on. Primary effects are much easier to identify than are later-order effects, yet it is probably the later-order effects that are most socially significant, as Lynn White, Jr., pointed out in his interesting article on technology assessment from the point of view of a medieval historian.

Cross-impacts (the impact of one effect upon another) are also important, as is the sequence in which the technology is introduced and the impacts felt (again, always in a specific historical situation, with specific—and unpredictably motivated—actors).

5. There is much, much more to "the causes of social change" than technological development alone. The statement, "we shape our tools and thereafter our tools shape us", starts out with the primacy of human action: *we* shape our tools. Why we shape which tools, and who controls that action, is also highly significant. And so are decisions, actions and values totally unrelated to "technology". I by no means minimize the role of politics in all of this. Indeed, I consider that to be central.

Finally, let me make it clear that I do not own stock in any manufacturing company, nor am I in the pay of any modern industry (save that of the industry of publicly-supported higher education). My interest in technology may come from misguided intellectual curiosity, but it is not from ideological privilege: while some of my best friends may be technocrats, most of them are not!

On age-cohort analysis

Let me offer some extended examples of age-cohort analysis from the writings of Leonard Cain, a sociologist at Portland State University in Oregon, specializing in the future of old age.

"My wife and I had from time to time discussed the differences between her parents and mine. Their rural and regional and social class backgrounds were somewhat similar, but their life styles were quite different. One day we discussed the possibility that their differences in age may be crucial. My father was born in 1896, my mother in 1900, my inlaws in 1903 and 1905. My father was well into

his thirties when the Depression hit, and managed to keep a job. My father-in-law had not achieved job security by 1929; he spent a decade and more searching, working temporarily, moving, and searching, moving. I set about the task of determining if there were what may be called a generational watershed which routed those born just before the new century began down one set of life-style paths, and those born early in the century down another set. Out of such observations hypotheses are born.

The data I managed to collect suggested that the age cohort born in the decade before 1900 had attributes and experiences which set its members distinctly apart from members of the cohort born during the 1901-1910 span. The younger cohort had a much better educational opportunity than the older: the shift from typical grammar school termination of education to high school experiences for most youths took place about the time of World War I. The younger may be classified as our first 'native born' cohort, with hardly one in twelve an immigrant; the older cohort reflected the heavy immigration of early years of this century much more fully, with one in six an immigrant.

The women in the younger cohort produced the smallest rate of births of any cohort before or since; their older sisters still reflected childbearing practices of an agricultural economy, though trends in birthrate had already become downward.

The 1901-1910 cohort was too young for World War I, too old for World War II, service. The men of the 1890's cohort supplied most of the manpower for World War I. Prohibition; women's suffrage; the 1920 Census, which reported America had finally become more than 50% urban; the new style of the Roaring Twenties; the widespread use of the automobile, the radio, and the movies; mass production; labour union expansion; came about after the older cohort was already of age, and provided new conditions for growing up and stepping into adulthood for the younger cohort.

I even tried to imagine the differential impact on health-related discoveries and new health programs on the physical bodies of the two cohorts. I have not yet found a way to deal systematically with the generational watershed which may have been produced by the discovery of vitamins beginning in 1913, of the movement to chlorinate water and pasteurize milk and vaccinate children against smallpox and to develop and expand public health services early in this century. But I suspect that the ravages of childhood diseases, of poor nutrition, of physically demanding labor, are manifest now in the bodies of those already being served by Medicare. The currently middle aged, with the health advantages from developments mentioned above, may produce a whole new challenge for Medicare, and for geritricians. And dare we speculate on the health care needs of the

recent cohorts who have had vitamins and innoculations and intensive pediatric care, when they become old, after 2001? . . .

I tried in this first formal venture into cohort analysis to add a practical note to gerontologists. It had been my observation that most of the studies by gerontologists were of samples of the already old. I reasoned that, by the time a systematic study of the characteristics and needs of the already old were made, the data processed and analysed, the results interpreted and published, then introduced to policy makers and legislators, and translated into law and finally into programs for the aged, many in the cohort studied would be deceased. Rather, I suggested, gerontologists need very much to become anticipatory, to study the not yet old in order to plan for effective programs as successive cohorts step into new old age roles. And, I hardly need add, an anticipatory gerontology would surely benefit social planners." (From Leonard D. Cain, "Planning for the Elderly of the Future", read before the Conference on "Planning and the Urban Elderly", 1971, pp. 3-5.)

I draw several conclusions from the method Cain suggests here (and uses more rigorously in several papers):

1. We are likely to err if we predict the salient values and behaviour of people in the future from those of "the average person" today.

2. There are significant value and behavioural differences between cohorts at present. If we wish to predict the values and behaviours of future decision-makers (for example), we cannot simply ascertain the values and behaviours of present decision-makers and project them into the future. Rather, we should determine those of the presently young who will (presumably) assume positions of power in the future, discounting appropriately for the effects of maturation, and also for the possibility that all "power holders" by definition may be significantly alike on the one hand and significantly different from non-power holders at all times by virtue of their power-seeking and/or holding propensities.

3. The differences between cohorts is due in part to diet (especially infant feeding practices), child-rearing practices (in the US, pre-Spock, Spock, and now post-Spock differences seem important), and significant, commonly-shared social events (such as wars, depressions, "Woodstock", fads, films, educational curricula and the like). These, and other events, mark the cohorts who experience them and distinguish them from other cohorts who, in essence, live in a different world, and interpret the same objective events quite differently.

4. Thus, as a cohort exercising social power more or less abruptly relinquishes that power to a succeeding cohort on death or retirement, there may be "sudden" changes in perception and thus in policy, and hence the smoothly extrapolated future suddenly shifts and a new trend line comes in-

to place. For example, in the 1950s, American students seemed to be well-socialized achievement-oriented youngsters with slight interests in politics. It was thought this would always be the case of good American youth, living in the best of all possible (Eisenhower) worlds. By the mid-1960s, American campuses were "aflame", and forecasters saw student activism ever-increasing. Today's students, however, seem to be even more apathetic than were those of the Fifties. And tomorrows?

5. Cain warns against expecting too much of even the best age-cohort analysis, however, He discusses the distinctiveness of the 1916-1925 cohort who "should" have exercised political power in the United States during the late 1960s and early 1970s, according to "normal" expectations of succession:

"The thirty year political history of the cohort is considerably less rosy than its economic history. The cold war, McCarthyism, the slow pace of the Eisenhower years, faced the members as young adults. Then came 1960; a man of the 19th Century was to be replaced in the presidency by one of their very own. 'The torch passes . . .' The so-called 'fifteen years after' phenomenon was operable again. The thesis is that approximately fifteen years after a major crisis (such as war), those who were entering adulthood at the time of the crisis are able to move into positions of power. In 1960, the youth of the 1940s, that is, the 1916-1925 cohort, was ready to take over and in many ways, did. With the assassination of 1963, the torch was passed back to an older cohort, and has remained there since. If there is impeachment and conviction, there will be Gerald Ford, also older than JFK.

Apart from the killing of younger minority members such as George Jackson and Fred Hampton, the victims of recent assassinations have been members of the cohort under review: John Kennedy, Robert Kennedy, Malcolm X, Medgar Evers, Martin Luther King may be considered an 'honorary' member of the cohort. George Wallace had a nearly successful attempt made on his life. And with the exposure of the dirty tricks by the Republicans in 1972. George McGovern experienced a type of political assassination.

The point is that the 1916-1925 cohort assumed responsible political leadership at the appointed time, but has been thwarted since 1963 in the sustaining of that responsibility. Will this denial of power continue?" (Leonard D. Cain, "The Futuristics of Aging", mimeograph, 1974.)

Cain was writing in 1974, and we know the answer to that question: Jimmy Carter, a Southerner who wears Levis and was born in 1924, is president. Does it make a policy difference? Could it have been predicted?

An approach to social design

Every semester for the past 12 years I have been asking students in my introductory futuristics classes to undertake something like the following assignment:

"In 15 to 25 typewritten pages, indicate your design of the best, possible, real society you can imagine for some real place. In so doing, undertake the following:

1. State the goals of your society — what behaviours or conditions do you want to facilitate? Which do you want to discourage or prevent? Why?

2. Operationalize those goals. For example, if you say you want a society where everyone is equal, what do you mean by 'equal?' Everyone five feet tall? Everyone black? Everyone having the same, or a range of, income or political power (if the latter, how is that operationalized?) or what?

3. Devise alternate institutions that will help you achieve your goals. Remember to consider all forms of technology. While you may of course adapt an existing institution or technology, try instead to invent something 'new.' For example, assuming that you mean by equal, 'everyone five feet tall by age 21,' there are a number of ways you might seek to have this achieved:

—Everyone over or under a certain height (or height range) could be killed.

—People over a certain height could be forced to crouch, or be bound and clothed so as to be reduced appropriately, or live and move in special grooves, or live in height-group communities, or. . . .

—People under a certain height could be required to wear high heels, or high hats, or ride horses, or bicycles, or use stilts, or be stretched, or. . . .

—Groups of people who 'normally' deviate from the required height —for example, Japanese and Watusis — could be required to intermarry.

—Height-enhancing or inhibiting foods and/or drugs could be prescribed.

—People could undergo lengthening or shortening operations.

—Medical service could be encouraged to discover the 'height games,' and to manipulate them accordingly.

—Educational institutions could develop growth-oriented curricula, and grade people according to their limits to growth.

—Religious organizations could exhort people to 'grow right with God' and threaten hellfire to those who disobeyed.

—The national and/or artificial environment could be controlled so that people would be conditioned to 'grow right' without

freedom and dignity, according to a schedule or reinforcements which would reward activity conductive to achieving and maintaining a proper height, and punish deviance.

4. Since you certainly will have more than one goal for your preferred society, see that they are mutually compatible. For example, many Americans say they want a society where everyone is 'free and equal.' On the face of it, that seems to be impossible. If everyone is free, they are not likely to be the same. If they must be equal, how can they be free — and different? By defining 'free' and 'equal' appropriately, you may be able to design such a society, but it will take care. Similarly, other goals must be operationalized so as to lessen incompatibility — or else the resulting dynamic tension must somehow be recognized and managed.

5. Since you presumably are designing a world that is not the world of today, what are you doing in your design to assure that it will stay as you want it to be, and not permit it to alter in undesirable ways? Note that I do not intend to imply here that you should prefer a stable world. You may prefer one in considerable flux. But how, then, can you prevent that world from stabilizing in undesired ways? In any event, how will you monitor the future of your world?

6. At one time I would have asked you to indicate how you get from 'here' to 'there'. In the past I have found this requirement to be so severe that many people have decided not to go very far from 'here' in their designs, thus thwarting my intention to get you thinking about clarifying your preferences rather than detailing political tactics.

Plans for a transition period are of crucial importance for actualizing any design for a real world, but at this point, I would be happier if you would dream broadly and clearly, rather than plan narrowly and pragmatically.

7. So far, I have said nothing about design constraints — things in the environment that you must take as 'given' and respond to in your design. Any good architectural or engineering book on design methods stresses the importance of determining such constraints very early in the design process. The exemplary World Order Model Project also has its researchers start out with a statement of their 'diagnosis' of the present and their 'prognosis' of the extrapolated future before it permits them to state their preferred future.

But I am not asking you to undertake a similar exercise here. I thus am in danger of encouraging utopian, rather than eutopian, dreaming. Your design may be so unrelated to the 'real world' of the present as to be totally impossible of attainment in the future.

How, for example, can one design for the future unless one first accepts the reality of incredible population growth, imminent resource decline serious agricultural uncertainties, frightening climatic ir-

regularities, immutable cultural traditions, imperialism, racism, sexism, etc., etc., etc.? Admittedly, one cannot. But my desire here, again, is to get you to think carefully about what you *want,* not about what you fear or what you dislike. While we are a long way from understanding the present adequately, far more people are engaged in that exercise than in attempting to invent the future. While past, present, and future must of course be merged into a coherent and effective political programme at some point if your dreams are to be tested by reality, that is not what I ask of you now."

And that is not what I will now undertake for myself. Rather, I will do only a portion of what I ask my undergraduate students to do — and what they have frequently done far better than I will.

A vision of a transformational society

In a paper written for the Rome Special World Conference on Futures Research 1973, I stated my basic values and goals for a preferred society. The next several paragraphs are a modified version of that statement:

"I desire a society where every human being is wholly free in every way from unwanted control by any other person individually, or by society as a whole or in any of its parts. The primary unit of my society of the future is the individual person. As a rule, in situations when an individual conflicts with a group of whatever size or significance, preference will be given to the expression of the freedom of the individual over that of the group.

In stating this preference for absolute individual freedom, I will show that I do not envisage as an ideal or as a probability that most or even many persons in my future will become aggressive, 'rugged individualists' in the John Wayne/Ayn Rand image, but I wish to make clear that I emphatically reject the notion that individuals should be pawns who, without real choice, must be subordinated in any way against their will to the desires and directions of any other individual or group, whether parents, spouse, siblings, children, peers, or representatives of society such as policemen, politicians, businessmen, imperialists, modernizers, priests, bureaucrats, teachers, or any one else.

In my world of extended opportunities for personal freedom, I believe that most individuals may seek to actualize a broad range of alternatives in communication, life-styles, social structures, religious or nonreligious beliefs, private and social practices, and so forth which may be, or appear to be, in opposition to the preferences of many — perhaps even most — other people now and at that time. Such a world indeed may appear to be 'chaotic' and 'disorderly' by current — or past — standards. Nonetheless, it is such a world that I prefer.

The primary function of society, and therefore of government at any level in this future, then, should be no more than to provide an environment in which each individual may become self-actualized, self-reliant, and self-determined without unwanted interpersonal or environmental constraints.

Without denying the current and past existence of some socially-conditioned or even biologically-determined human commonalities, I am convinced that because all individuals are in fact unique in both genetic endowment and social experience, they are actually unique and significantly different also in their current attitudes, desires, and behaviours. Individuals are thus not 'equal' in most important instances, and while at one time it may have made sense to treat them as though they were equal (or at least readily classifiable), to do so in the future is undesirable both because it is increasingly unnecessary and because it is contrary to my own basic value preference. As a rule, each individual should be treated the way he or she wishes to be treated.

Thus I take this as the criterion by which we shall judge all political structures and decisions in this future: is the individual enabled to do what that individual wants to do? If not, then my basic preference has been violated, and every attempt should be made to modify the political structure or decision in order to bring it in accord with the basic value preference. I do need to make it clear, however, that I recognize that it may be 'necessary' ultimately (because of our failure of imagination to think up a freedom-preserving alternative) to limit some individual's freedoms — or some individual freedoms — but every attempt must be made to eliminate, or, failing that, to reduce to a minimum even the 'necessary' limits.

Such a condition of individual freedom might be meaningless, if not positively harmful, for individuals without the following conditions also applying:

1. Every individual has an absolute and irrevocable right to food, shelter, clothing, medical and dental care, and any other material goods and services which are available to anyone else. In principle, these things should be made available to each individual's own level of satisfaction. That is, the distributive principle is that of R. Buckminster Fuller's 'bare maximum' rather than current notions of 'minimum standard of living,' 'minimum guaranteed annual income,' or the like. If it turns out to be impossible for each individual to have all of the 'things' that the individual wants, then each individual should be guaranteed a real 'functional equivalent' to that individual's self-determined satisfaction.

Finally, if it turns out that there are items of true and permanent scarcity which cannot be distributed by the principles above, then

these things must be permanently owned by no one, but rather made equally available to all by lot or by rotation of use for fixed, brief periods.

I believe that most of the things now considered scarce — housing, food, goods, medical care, and so forth — can be made available in sufficient quantities to satisfy demands either for the specific (or duplicated) item, or its functional equivalent. Moreover, in the society of 'abundance' that I posit, I do not believe that most person's desires for goods and services are insatiable. Insatiable desires are generally a function of relative, rather than absolute, deprivation, and hence seem to be the consequence of specific socialization practices, and not of immutable 'human nature.'

2. Every individual must have the right to be physically mobile or to remain in one place. One of the most important freedom-encouraging and enhancing capabilities of modern times is physical mobility. Most societies now very inadequately cope with this opportunity and its problems by invoking rules and customs drawn from a more stable, sedentary past, and only haphazardly modify them to accommodate certain technologically-forced changes. The ironic contradiction between laws which prevent both migration and loitering is one example.

I believe that everyone should be guaranteed the right and provided the opportunity and means to move about or to stand still. But I do not mean by this that any individual has the right to intrude seriously upon another. Each individual also has the right to be left alone from unwanted interference by any other person. Any actual conflict in these two rights may be resolved in many instances by adding that while each person has the right to be left alone, no person should be so annoyed or offended by the mere presence, acts, or communications of another person that this other person is thereby obliged to move on — or not to move on. While one person's right of mobility ends, as in the analogous classical situation, where the other person's body begins, accommodation and tolerance are first to be sought in situations of conflict. However, if two or more people nonetheless wish to occupy the same space, or to move in the same direction, a solution of functional equivalence should next be sought. Only when this is finally determined to be impossible should the conflict be settled by lot or rotation.

3. Each individual has the right to acquire as much knowledge, information, education, and experience about any topic as that individual wishes. But no one must be forced to learn or receive communication about anything at any time. However, no information about anything shall be denied to anyone who wishes it. This implies an end to many of our recently-acquired notions about privacy to the extent that no one can deny another person any information that directly relates to that other individual, and all persons should be discouraged from withholding any information from any other person. Still, in the final analysis, a person can refuse to tell someone something of a strictly personal nature that has no significant relation to the well-being of the other. All other communication must be open to anyone who wishes to receive it.

4. Every individual has a right to effective participation in all social decisions which affect that individual. Considering the probable range of behavioural diversity in my future society, I believe the following principle to be conducive to significant decisional participation by each individual:

As far as possible, society should be arranged so that all individuals can act as they please. When collective decisions cannot be avoided, the size of the groups involved in and affected by the decisions should be kept as small as possible so that all persons substantially affected by a decision are able to participate effectively in making it. Genuine effort must be made to maximize the efficacy of the individual's effect in decision-making, both in process and in outcome. In keeping with my basic rule, I believe that an individual should fully understand and positively consent to any collective decision which affects that individual. If the individual cannot consent, and if a collective decision is made which an individual judges negatively affects his or her freedom, then he or she has the right to receive compensation from the collectivity in such a manner as to redress the infringement.

5. Every individual has the right to seek and to receive affection, however and wherever expressed, from any other individual who wishes to display such affection. While any individual has the right to seek affection, any other individual has the right to deny it to that individual, without either person implying offense or rejection.

6. Any individual has the right to join — or not join — with any other individual or group of individuals who wish that person to join with them for the pursuit of any mutually-shared purpose which does not seriously affect any individual not in the group or consenting to its activities. While an individual may accept the consequences of consensual, or majoritarian, or any other collective decision-making rule, each individual also retains the absolute right to resign from the group or to fail to abide by its decision at any time. That is, an individual may subject his or her will to be the will of another individual or group, but may also at any time refuse to accept another's decisions.

The boundaries of my society of the future are not complete without including a minimal set of social and environmental responsibilities:

1. No individual is free to threaten, harm, or kill any other person against the other person's will.

2. No individual is free wantonly to modify the world about.

3. Every human being must be made aware of the probable significant effects, both on other individuals and on the ecosphere in which we all must live, of any specific individual and collective action before he or she acts.

4. Nothing in these three items is meant to prevent a person from doing with him or herself what he or she will, nor to limit the varieties of interactions between consenting individuals, nor to encourage us to become too narrow in our conception of what a 'natural' or a desirable environment is. But there may have to be some limits to behaviour in these areas, if this society is to become and remain an environment where self-actualized individuals are the focus and substance of life."

Much of the rest of my "undergraduate assignment" — the social and technological institutions that would operationalize such values — are indicated in the remainder of my Rome paper. Therefore, I will conclude my "vision" of a Transformational Society by showing why I think such a world is preferable, thereby linking the two theoretical assumptions presented in the opening pages of the paper briefly to the values and goals just stated.

For hundreds of thousands of years, humans lived in small hunting and gathering communities of rarely more, and frequently less, than one or two thousand people. Each individual's world was almost totally defined by that small community — its language, customs, environment. Moreover, the members of that community generally formed an essentially closed breeding pool. Hence, to the extent that genetic inheritance determines behaviour or predispositions towards behaviour (and while that extent is a point of controversy at present, I believe it will be found to be significant), to that extent the individuals in the community also shared common predispositions towards behaviour.

Humans' physical technologies were quite simple, compared to those of the present, though their biological and social technologies were formidable, shaping and determining human behaviour and beliefs with much more precision than do similar institutions today. Yet, humans generally were not able to make as much impact upon the physical environment as they are today, though sometimes that impact could indeed rival that of the present.

Many of the social institutions and values of the present are only modestly altered carry overs from those earlier days, and many of the attitudes and predispositions of humans today come from the consistent reinforcement of those hundreds of thousands of years, only occasionally challenged and altered by more recent evolutionary experiences.

The first major challenge to the structures and behaviours of hunting and gathering societies, one which itself is much more recent in time, and also (with the continued existence of some hunting and gathering societies in the world) has not wholly replaced the earlier predispositions, was brought by the invention of agriculture and all the subsidiary social inventions that went along with it: the extended family, the state, organized religion, academia, writing, war and the military, "art", bureaucracy, cities, commerce and all of the other agonies of civilization and its discontents.

There is no doubt in my mind that the technologies of the agricultural revolution made it possible for those who interacted fully with them to become significantly different types of "humans" from those who enjoyed only hunting and gathering-related technologies and institutions. Nonetheless, there were important "life-style" differences between the majority who worked the land and the minority who lived in relation to the subsidiary institutions that the agricultural surplus made possible. The government official, the priest, the scribe, the warrior, the bureaucrat, the merchant lived in a world that was significantly different not only from that of the earlier hunter and gatherer, but also from that of the farming peasant. For one thing, he encountered far more humans in his life, who had quite different values and orientations than did either the hunter/gatherer or the average peasant. For another, if we were of the even smaller minority who could read and write, he had open to him a memory and recall system which made the past part of the present in ways which tribal oral memories could not. The past became much less malleable when it was written down. Now it became possible to colonize time — for some to rule beyond their lifespan. Though interpretations could differ, the words remained the same, while with oral traditions, words were constantly changed to fit changing conditions and needs.

Much of the world still lives in this agricultural condition, or is only recently (in the last 50 to 100 years) beginning to emerge from it. For many people, values and behaviours developed during the agrarian period still seem to be "natural". I believe this is especially the case in a country like the United States where, as a nation of immigrants, so many people are only a very few generations away from having been "forever" peasants.

A great deal of the appeal of the "ecology movement" may lie in the very deep peasant roots found under most Americans. "Life in the Suburbs and the American Way of Life" is only of very recent origin, and an interesting combination of Judeo-Christian guilt, and culture/future shock has been sufficient to turn a resource challenge into The Limits of Growth, if not into a Coming Dark Age in the confined imagination of some Americans. I suspect this may also be the case of some people in the industrial countries of Europe and Asia as well.

Industrial society is not much more than 100 to 200 years old as a major shaper of the folkways of an important part of the world. All of the values

and institutions which are used to distinguish a "developed" from an "underdeveloped" country are measures of that change. Although a substantial portion of the alleged attitudinal and behavioural differences between persons in "developed" and "underdeveloped" areas are due to the system of imperialistic exploitation inherent in the present process, there nonetheless seems to be a considerable residue that really is the consequence of expectations and orientations resulting from importantly different experiences of people in the two technological cultures.

And, just as clearly, I believe the dominance of the culture of industrial societies is itself now coming rapidly to an end. This is partly due to the very real aspects of The Limits to Growth, and to the re-orientation of values and preferences on the part of people envisioning and striving for the creation of a "Conserver Society". It is also partly due to the rapidly rising political/economic/cultural awareness and capabilities on the part of the Third World and their ability to envision and move towards a future which is not merely an imitation of the present of the West.

But finally, I believe that a substantial portion of the post-industrial society will be driven by emerging technologies in the area of communication, bio-medicine, space, parapsychology and human management. These technologies, identified as being future-potent by the first "futurists" of the late 1950s and early 1960s, still remain of extreme importance, in my view, although it is no longer fashionable to speak of them. Our silence has not made them go away, however. Many of them are being quietly introduced and are having the "individualizing" consequences that were predicted. Being small, relatively energy–conserving, and generally convivial, they are readily accepted and utilized by ordinary people, although many intellectuals (and here I must say I agree with many of the conclusions, if not the tone, of Herman Kahn's indictment of "The New Class") specifically reject them and — being thus ignorant of their real use and potential — move further and further away from an understanding of what actually is shaping the future and influencing the attitudes and behaviours of many of their fellow human beings.

The technologies I am referring to include presently-existing and further-refining items like portapak video systems, video tape recorders, polaroid movies, CB radio, cable television, satellite communication systems, home computers, computer conferencing networks, electronic newspapers, memory-enhancing pills, recombinant DNA, genetic counselling, cloning, the space shuttle, biofeedback techniques, electronic Yoga, etc.

All of these — and many, many more of a similar nature — encourage individuality and force individual decision-making. They are thus quite unlike industrial technology which encouraged mass conformity and thus fit well into tribal and agrarian expectations of similarity between people. While many humans choose and are choosing to "escape from freedom" and yearn for some form of external "truth" or decision-making process that

will deliver them from the responsibility of self-actualization (hence the tremendous renewed interest in religions, old and new), as more and more people experience individual decision-making in their own lives and the fact of their difference from their erstwhile neighbours, then (as age cohort analysis might indicate), subsequent generations of humans should learn to tolerate, then to expect as normal, a situation of individual decision-making and interpersonal difference that we presently might consider to be intolerable anarchy.

That is the world I see as possible and preferable, and that is the reason I present the values that I do for my preferred future.

I must immediately admit that I am focusing on only one facet of a multifaceted future. It is possible, as so many warn, that humans are not able to stand the fast pace of change and the necessity of individual responsibility that I foresee. It may be chaos indeed — beyond our ability to withstand.