

**Communicating In A Shrinking World :
Local/Global Networking**

By

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Communicating in a shrinking world: Local/global networking

The metaphor of *networking* is most likely to be interpreted as a victory over what has been called the tyranny of distance. In this case it has positive overtones, as if the barriers are coming down for a more open exchange among different people separated by distance and culture. It is most commonly expected that such an exchange will make for some kind of better world.

But is such a positive interpretation justified? Or is it wishful thinking, or even deliberate promotion, on the part of optimistic technocrats who have vested interests in the advance of the emerging communications and information technologies?

This paper will use an alternative metaphor, *netweaving*, to examine the apparent tensions, paradoxes and contradictions surrounding the introduction of new communications and information technologies. Especially it will investigate the complex associations between apparently opposing dimensions within three layers of the social fabric: globalisation/localisation; centralisation/decentralisation; and standardisation/diversification.

Barring some unforeseen catastrophe, four alternative scenarios are painted for a generation from now -- about the year 2020: the Gold Lamé and Sackcloth, Drab Uniform, Rich Tapestry and Bazaar.

A plea is made for the Rich Tapestry Scenario.

Netweaving: An alternative metaphor

I wish to highlight the inadequacy of the title of this paper which incorporates the concept of *networking*. Networking was included because of its widespread currency. But I intend to show how the metaphor of *netweaving* is more insightful in helping understand what is happening within the current so-called revolution in communications and information (C&I) technologies.

Networking most commonly has a positive value in the conventional wisdom of rational economics and technological optimism. It is believed to promote freer and more open exchange among people separated by distance and culture, as if the new technologies are tearing down the social and commercial barriers once seen to promote the tyranny of distance. Also, networking is thought to forge beneficial linkages among people, to bring them together in multilateral relationships, like at a Tupperware party or a convention of surgeons. However critics of this free-market approach would suggest that networking is nothing more than blatant wheeling and dealing.

Within cooperative, alternative communities, networking also has positive connotations for its contribution to multilateral exchange, but for purposes of participation in decision making, mutual understanding and sharing of resources.

Netweaving, although not a commonly accepted term, avoids such confusion in values and provides a useful, new metaphor for studying the nature of the social fabric.

The social fabric

It is widely agreed that the emerging C&I technologies are set to change the nature of the social fabric like nothing before. But in what way is still unclear.

Whether the social fabric will shrink or expand, whether it will become richer or more drab is still in question.

There are the technological optimists who predict a thicker, richer weave as the outcome, while the pessimists fear a wrenching of the social fabric by the influential merchants with knowledge and money. The idealists hope for a more harmonious, cooperative linkage of multicultural interests acting locally in a global network, while certain pragmatists see a continuation of the trend to an homogenised, global culture.

Will there emerge an either-or range of gold lame for the have's while the have-not's will have to make do with the tattered sackcloth of the pauper?

Will there be an expanded, rich tapestry of diverse colours and textures harmoniously entwined, or a drab, shrunken uniformity?

Or, will there develop a bazaar with a wide display of all these social fabrics?

The C&I paradox

There is no easy answer to these questions. On superficial inspection, the emergence of the new C&I technologies certainly seems to be shrinking the world in terms of linkages across spatial and cultural differences. But at a closer look, this shrinkage could be leeching the very creativity from a traditional sense of community that thrives on local initiative, decentralised autonomy and diversity.

The emergence of C&I technologies is, like never before, highlighting the apparent paradoxical or contradictory effects of new communications technologies, at a time when these technologies are fast converging with computing.

There are apparent tensions particularly between three pairs of forces which, if not directly competing, are at least bearing on different elements or different layers of the social fabric. They are: globalisation and localisation; centralisation and decentralisation; and standardisation and diversification.

Whether they are simultaneous, reciprocal bipolar opposites, whether they are paradoxical complementarities, or whether they are different forces acting at different logical levels (for example, Bateson, 1972) needs further investigation (see Stevenson, Burkett & Myint, 1994; 14). Whatever their nature, they certainly help demonstrate the significant, if complex, way in which emerging C&I technologies are acting on the human symbolic system to shape the future.

Global/local tensions

Futurist, Walter Truett Anderson (1987; 11-29), has reminded us how the human ability to symbolise has transformed both social interaction and inner, human experience, as well as the biosphere itself. Developing into speech and, later, writing, this symbolising has been at the very heart of humankind's manipulation of plant and animal life.

The same symbolic system, attended by modern transportation, communications, commerce, human migrations, and the biological manipulations of agriculture and science, is 'wrapping a new system of linkages around the globe, creating new patterns of interaction among all things that inhabit it. The effects of human civilisation sweep through all natural ecosystems, change them, and connect them in new ways to the rest of the world' (Anderson, 1987; 243).

The globalisation spawned by this advanced, symbolic system and its impingement on the species' own biophysical homeland, now stand ready to turn back on the very social system which created such conditions. This backlash will be aided and abetted by the emerging C&I networks, now blithely called *superhighways*, which have the potential to alter human governance and quality of life.

Even back in the 1970's, according to Harlan Cleveland (1993; 3), we did not realise how explosive would be the marriage of computers and telecommunications, requiring us to rethink the very fundamentals of our philosophy, to rethink an economics based on scarcity, governance based on secrecy, laws based on exclusive ownership and management based on hierarchy.

But the rethinking is complicated by the notion highlighted by James Rosenau (1992a; 1) that new technologies have intensified pressures 'toward *both* globalisation and individualisation, centralising and decentralising dynamics that are at one and the same time reinforcing and offsetting'.

It seems that globalisation is contending with contemporary, countervailing trends for localisation as witnessed, for example, by increased tribalism and ethnic conservatism, as well as calls for more local autonomy. It seems impossible to consider the impacts of globalisation without also examining its reciprocal association with local change among individuals. As Rosenau (1992b; 272-273) argues, macro changes impact significantly upon micro actors and, conversely, the micro changes feed back to sustain or enlarge the dynamics unfolding at the macro level.

By juxtaposing photographs of recent events, Rosenau metaphorically has summarised 'the central tension presently racking world affairs'. One image shows the earth taken from the moon, a blue sphere seemingly suspended in timelessness, expressing 'the large extent to which all humans are confined to the same limited space and thus bound to the same vulnerabilities. The other is an intra-uterine photograph of a foetus, the beginning of life set to evolve its own identity and to trace its own unique course'. Communications technologies have repeatedly circulated, worldwide, 'contradictory images that signify permanence and fragility, universality and diversity, continuity and change'.

The C&I technologies have the potential to impact on both globalisation and localisation - and to link them on a global scale. They can provide a linkage between local and global events through the global coverage of local events, such as the Chernobyl disaster, and the localisation of global issues in the way that Chernobyl has suggested the need at the local level to check the potential for radiation disaster in neighbourhood toxic dumps.

Japanese futurist and information economist, Kaoru Yamaguchi (1990), argues that global networking will enhance local responsibility. He believes that the capitalist market economy is already being replaced by an economic framework of self-management and information sharing. As services and information become globally traded goods, new economic structures are emerging based on globally networking *eco-share* regions made up of ecologically-knit habitats where people share traditions and cultures. Yamaguchi proposes a *MuRatopian* economy as the new social design of the information age characterised by village support systems and stewardship of the local environment.

However, not all people are as hopeful as Yamaguchi. It seems much more complicated.

Towards centre or periphery?

Janet Lippman Abu-Lughod (1992) has shown how communications revolutions, from printing to the telephone, have routinely permitted the decentralisation of some elements of society while, at the same time, tending to concentrate others. She proposes that the consolidation of the absolutist nation state was assisted by the ability to codify, in print, regulations and directives from the centre to the peripheries. Simultaneously, in Europe, itinerant printers diffused common knowledge and made possible printed production for specialised market niches.

Thus C&I technologies have the potential, also, to evoke similar tensions between *centralisation* and *decentralisation* as they do between globalisation and localisation. For example, van Dijk (1993;399) argues that, at the level of the western nation state, governments seek to strengthen the central determination of limiting conditions, such as state expenditure and the efficient registration of citizens, while seeking to decentralise local administration. C&I technologies have much to offer national governments in van Dijk's example, not only in controlling financial disbursement and maintaining data bases, but in distributing work and documentation.

Standardisation or diversity?

Similarly, C&I technologies have a role in the reciprocal trends to *standardisation* and *diversification*. For example, satellite television is increasing the standardisation of English as an international language: *MTV* takes the English lyrics of much contemporary rock music into Eastern Europe and Asia; foreign ministers appear on television speaking English. At the same time, C&I technologies have the potential to offer instantaneous translation, a capacity that would be welcomed by the critics, such as Tsuda Yukio (1992;34) who sees the dominance of English as the third most serious discrimination issue in the world after race and gender.

There are instances where a trend towards global standardisation of culture and social norms has engendered a backlash which appears as *local fundamentalism* whereby local groups or communities react by retreating into their traditional local cultures, sometimes in rather extreme and exclusive ways. There are current examples in the former Yugoslavia, in the struggles of small territories of the former Soviet Union to gain independence and regain their traditional cultures, and in the ethnic conservatism becoming obvious in many immigration policies of western nations, including Australia.

Linguistic imperialism

One problem, aggravated by the potential of C&I technologies, which is attracting increasing attention is the domineering linguistic imperialism of English which is now spoken as a second language by more than the estimated 300 million people who speak it as their native tongue (Tsuda, 1992; 32). According to Tsuda (1993; 69-73), monolingual communication has three negative effects:

- . disappearance or weakening of indigenous languages in the colonised areas, handicapping communication for the colonised;
- . invention of pidgins and creoles, creating negative perceptions of the colonised; and
- . colonisation of the mind of those colonised, preventing the development of their self-determination and self-affirmation.

Tsuda (Futatsugi, in Tsuda, 1992; 33) quotes the example of an incident in the International Whaling Commission which acknowledges only English as its official language. At one meeting there was confusion among French and Mexican representatives who had failed to comprehend the proceedings in English and had voted to approve a motion when in fact they had held opposite views.

According to the technological optimists, while such negative effects may be countered by a freer growth of international trade, it is useful for the longer term to critically examine whether expanded global commerce is more advantageous than the destruction of cultural diversity and crosscultural understanding, and the further centralisation of control in the hands of the relatively more powerful economic and cultural interests. As Riccardo Petrella (1993) has argued, '... a high-tech archipelago of affluent, hyperdeveloped city-regions is evolving amid a sea of impoverished humanity'. If current trends continue, areas such as Orange County, California, and Osaka, Japan, will become predominate over the nations themselves. The globalisation of the economy and advances in science and technology are creating riches from which the majority are excluded, as in some form of *techno-apartheid*.

The globalisation of language, even more greatly fostered by C&I technologies than by international transport alone, is one way to standardise culture and world view, shrinking the globe in spatial and cultural diversity. But this standardisation opens the way for increased control of the periphery by the more powerful centre, as that centre shifts even further towards an international concentration of economy and politics,

away from a diversity of national authorities. This centre could be a network of powerful, vested interests.

Peter Muhlhausler (1994; 17) has said that a common language has been seen as a necessary binding ingredient for the development of a new nation state; a single national language is often seen as a precondition for all modernisation. Extend Muhlhausler's notion internationally, and standardisation becomes a prerequisite for internationalism and future globalism as a further centralisation of power in some specialised, global network. The spread of international networks through telecommunications is now threatening the authority of the nation state which has virtually lost control over the exchange of finance and information that now bypasses traditional national boundaries via multinational organisations, from General Motors to the International Labour Organisation and the Red Cross. And the adoption of English as a common language in many of these multinational networks heightens their international power.

Muhlhausler (1994; 17-18) sees a new, growing concern for linguistic and cultural diversity, but this is still not as publicly widespread as the concern for biological diversity. The destruction of biodiversity has taken millions of years, yet, he reminds us, the erosion of linguistic diversity has taken a mere 100,000 years. If we accept the theory that our world views are developed and sustained by language, then, he says, each language may be seen as a provisional interpretation of a world so complex that the only hope for understanding it is to approach it from as many different perspectives as possible. Muhlhausler (1994; 21) believes that the west is trapped by the limitations of its languages and this is one of the main reasons for the lack of progress in environmental sciences. As an example, in Barrai, a language of Papua New Guinea, the notion *my land* suggests interdependence -- the need for balance and cooperation between people and the land. By contrast, western metaphors of the land distinguish between people and the non-human world, as if the world were created for the benefit of a privileged, human species.

The problem of linguistic imperialism demonstrates the difficulty in addressing the choices between standardisation and diversity, global equality and discrimination, and isolation and global participation. If people are to retain their traditional culture, with all the benefits of perspective this brings, how will they share meaning with people of other languages and cultures? A global artificial language, such as Esperanto, would lose much of the fine shades of meaning of many natural languages and standardise human thought systems. Does this mean all people with global connections need their own language plus a second international language? And if so, what should be the international language? Should it be natural or artificial?

Alternative futures

The choices which lie ahead are complex and made more so by the emerging C&I technologies. In an attempt to examine the choices, it is proposed to use a futures studies perspective. This is not an attempt to forecast the future. That would be impossible given the complex cross current of change in which the world is caught up. There are too many unknown variables that will intervene on the way to the future.

Assuming the future is not preordained, it seems useful to engage in a futures-visioning process. This assumes that by having foresight -- looking ahead -- there is a range of alternative futures available to us at any one time. The future we end up in is the result of the choices we have today and the decisions we make about those choices.

It is proposed to envision four alternative future scenarios, barring some unforeseen natural or human-inspired catastrophe, that could result from the central role played by the emerging C&I technologies. Of course, this also assumes that the C&I technologies will continue to be major players with the significant potential for change that has been widely attributed to them.

The scenarios are inferred to the questions posed at the beginning of this paper and are the:

- . Gold Lane and Sackcloth Scenario;
- . Drab Uniform Scenario;
- . Rich Tapestry Scenario; and
- . Bazaar Scenario.

It is proposed that by spelling out these alternative scenarios, the choices available will become clearer and their implications can be debated.

It is important that these scenarios be depicted for at least a generation into the future, about the year 2020, since such a time frame is surely the minimum lead time needed for the significant choices and changes that need to be made and the education of a new group of effective adults with changed mindsets.

Visioning also assumes that individuals can make a difference in deciding which future they prefer to hand on to future generations. Such visioning allows people to anticipate the consequences of today's actions by linking longer-term visions to today's choices and decisions. It also encourages people to accept responsibility for the consequences of today's actions, a practice not common in contemporary business and politics.

Gold Lane and Sackcloth Scenario

This is a highly possible, if not probable, scenario. We have, basically, an escalation of the current situation. The gap between rich and poor, whether in terms of information, materials or money, gets even wider. The fabric of the rich is crafted from the threads once worn by certain of their oppressed. Difference is tolerated, but mainly to distinguish between those who have and those who do not. Those in power travel first class while the rest must struggle to survive. The centre controls those at the periphery and further colonises their labour, minds, lives and spirit. Optimisation of productivity valued higher than widespread creativity and happiness. The nation state is largely replaced by elite transnational networks of vested interests which by the end of the 1990s have further bypassed the authority of the nation state with the aid of C&I technologies. The North-South gap is being replaced by marginalisation of certain regions, even within the present industrialised nation states, or what is left of them. Ownership of the networks is in few hands and they have a leading influence

on social governance. Culture becomes further globalised with English even more widely used as the international language. Education is increasingly centralised to globalise the world society. The economic imperative still seeks to assert human dominance over nature and the balance between economics and ecology still favours economics. Technology is power and information is money. Aided by science and technology, life becomes more automated and the living environment more artificial, with spirituality the only haven for the have-nots. Life is still institutionalised but new global institutions replace many of the old local ones. Individual liberty and human dignity is realisable mainly by those at the centre. The vast majority have submitted further to dependence on the controllers of the system.

Drab Uniform Scenario

This is an extreme scenario, but is possible if not probable. The networks have hoisted global centralising authority to a small, powerful elite of business and political interests (even more concentrated and centralised than in the Gold Lame and Sackcloth Scenario). It may be that this authority is held by the ownership of the international network monopoly, itself. Virtually everyone but the small group of global elite is subservient to a standardising authority and is virtually homogenised in economic and political terms. Most people are clothed alike in uniform fabric. Difference is scorned. Those in power travel in a small first class suite while the rest must to struggle to survive. The powerful centre standardises humanity on a global dimension in terms of their labour, minds, lives and spirit. Efficiency and productivity reign supreme, at least in the minds of the controllers. Nation states are few, having been replaced by a central, concentrated network of business and political interests made possible by C&I technologies. Much of what was the North has been turned into the South, just as much of New York City now resembles the Third, if not Fourth, world. Small enclaves of the rich and powerful exist in isolation under tight security. Ownership of the networks is centralised in the power monopoly which is in league with organised crime. Traditional culture breaks down under the strain of a uniform global aesthetic. English is forcing most other languages, except Chinese, out of common usage. Education is increasingly centralised and standardised globally. Nature falters under the economic imperative and artificial replacements are engineered through nanotechnology. The world is fast becoming artificial with human spirituality in decline. Life is still institutionalised but globally. Individual liberty and human dignity are out of the question for most but a small elite. While the vast majority have submitted further to dependence on the controllers of the system, guerilla movements are beginning to challenge global authority. Law and order are threatened.

Rich Tapestry Scenario

This is a highly desirable scenario for the vast majority, but is improbable without a change in the current, dominant mindset, at least with the economic and political leadership. Certain critics would name it the utopian scenario. The gap, in terms of information, materials and money, begins to close. The fabric most valued is a rich tapestry of diverse colours and textures. Difference is not only tolerated but encouraged. Threads from all social strata are valued and shared. There is no need for first class. Most people travel that way, but with modest trimmings. There is a

hardly definable centre. People take responsibility for their own self sufficiency and value self determination. Labour is owned by individuals not by a central authority. Most laborious tasks are performed by automation, leaving the caring functions to individual effort. Work is neither compulsory or overbearing and people have more quality time in which to be creative and happy. The nation state, left with little authority, is largely replaced by a network of communities largely self-organising at local and regional levels with the help of C&I technologies used appropriately. The North-South gap is becoming harder to define, with pockets of underdevelopment in countries of both the former North and South. The once-marginalised are being singled out for special assistance. The networks are owned and maintained by communities collaborating in global consortia. Multiculturalism is highly valued and several languages are emerging in international use, especially Chinese. English is still widely used internationally, but citizens with international interests are becoming multilingual as happened in the uniting Europe of the 1990s. Education is increasingly decentralised to account for regional and local preferences. A social compact between economy and ecology seeks to rehabilitate environmental degradation and prevent further abuse. Ecological engineering is a prime social and business function. Technology is increasingly relegated to being a tool for solving social problems. The artificial is valued as highly as the natural and human spirituality finds new dimensions and means of expression. Life is largely being deinstitutionalised with a waning of interinstitutional competition. Individual liberty and human dignity are highly valued along with social responsibility and a sense of community. There is a new meaning for human potential.

Bazaar Scenario

This is the most probable scenario, given that it may take more than a decade to see a change in the conventional wisdom of economic rationality and representative, rather than participative, democracy. There are rich and poor, with some slight closing of the gap. There is a variety of fabrics, gold lame and sackcloth, drab uniforms in certain regions and growing inventory of rich tapestries. Difference is accepted, but not uniformly. There are several classes of travel, depending on where one lives. There is centralised control in certain regions and autonomy in others. Nation states still exist, but most are waning. There are several centres of control, as well as regions where individual and community autonomy values personal labour, and different mindsets and lifestyles. Creativity is valued as highly as productivity depending on the community. A mosaic of networks coexist with patches of centralised authority, both supported in their own way by C&I technologies. The North-South gap is less discernable. It does exist but not on North-South lines. Certain former industrialised areas have swapped places with what today are the underdeveloped. Ownership of the networks is fairly widely spread, although monopolies exist over certain regions. Culture becomes further globalised in certain regions, while other regions maintain and, even enhance, their traditional heritage. English becomes more widely used, but so does Chinese and, perhaps, a language such as Indonesian. Education is standardised in certain regions but deinstitutionalised in others. Certain regions strike a balance between nature and economy, while others become even more economically rational. Technology and information are valued more highly by some communities than others. Artificial environments are evident in certain regions while in others nature has been paid

more respect than at present. Human spirituality is valued by some and despised as irrational by others. Certain communities have deinstitutionalised while others have invented new institutions for control and standardisation. Values of individual liberty and human dignity are valued highly in certain regions more than others. Maybe, looking at this scenario today, it would be more appropriate to call it Bizarre! Yet it seems, today, the most likely.

Why envisioning?

It is important to recognise that envisioning alternative scenarios is not intended as a definitive construction or forecast of the future. None of these scenarios is claimed to be a forecast. Rather, they offer a means to allow a variety of different perspectives to be examined and debated at this point in time. Envisioning, such as this, enables individuals to participate in the choices available on the pathways to the future.

The use of scenarios is made more powerful with backcasting, a method of identifying the changes that need to have occurred along the way to the realisation of a scenario, as well as the necessary strategies and actions that need to be put in place for such changes to occur. Backcasting is simply a means of working backwards from the future. For example, in order for collaborative networking to take place, that is an empowering of local communities to link globally for exchange of goods and services, as in the Rich Tapestry Scenario, backcasting must identify what new institutions need to be in place, or laws amended, by about the year 2010, for any significant change to occur in 2020. This may demand a lobbying campaign with the customs officials of the nation state to change customs regulations, that is assuming nation states still hold such legal power.

Backcasting is the opposite of forecasting which seeks to extrapolate the future from the past or present. Unlike forecasting, backcasting does not constrain what is possible in future, since it works back from scenarios which need not be restricted by past and present conventions, institutions, values and mindsets. Used with envisioning techniques, it offers a way of breaking free from any current stalemate which may be perpetuated by existing problems and ways of seeing and doing things.

It is readily admitted that envisioning is restricted by the inability to foresee what changes and interventions lie ahead. However it is not forecasting, but a means of foresight which, if done continually, allows forthcoming changes to be anticipated as early as possible and which provides a range of options for choice and decision making. It is like driving a car. We do not know what is round the bend, but we are continually preparing for it.

Futures visioning is not meant as a replacement for history, simply a way of extending the temporal perspective. It is still important to learn from history and futures-oriented thinking, by breaking free of past and current conventions, can often help redefine history.

Which C&I future?

In this presentation, four scenarios have been construed in order to examine, critically, some of the options open to the human condition through the intervention of emerging C&I technologies. Personally, I believe the Rich Tapestry Scenario offers hope for the most desirable future of any others discussed. However, it does need what may be generally viewed as an unlikely commitment, or a change of heart, by those currently driving the development of the emerging C&I technologies. While it is highly unlikely to see this kind of scenario become a global reality, there could be pockets of the world in which local empowerment becomes a reality.

The Gold Lane and Sackcloth has been anticipated by authors such as Petrella (1993) and constitutes a linear extrapolation of many trends already evident in contemporary society. However, we cannot ignore the simultaneous forces for centralisation and decentralisation, standardisation and diversification that most likely will ensure some social plurality by 2020.

The Drab Uniform Scenario, as a harsh extreme, seems unlikely to eventuate globally, given the pluralism of today's society. But there are parts of the world where neo-fascism and radical nationalism may see it eventuate. Russia is one possibility where criminal elements and/or nationalist radicals could take control of society, given present events.

From the current position in space-time, it seems more likely that the Bazaar Scenario will most typify the future within a generation. In practice, a generation does not seem long enough to expect significant changes in the North-South gap, the power difference held over the users by the technocrats, and the conservative antivisionary leadership provided by today's political leaders whose horizon stops at the next election, and the self interest of present investment in C&I technologies and their associated applications.

Whatever eventuates, more envisioning by those involved with the development of the coming telecommunications superhighways would allow the world to see the range of choices available in future and allow wider participation by users in the decision making and policy formulation that must take place over the next few years on the way to tomorrow.

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