

Incidental Paper

**Context for Decisions:
Global and Local Information
Technology Issues**

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Program on Information Resources Policy

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Note

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**CONTEXT FOR DECISIONS:
*GLOBAL AND LOCAL
INFORMATION TECHNOLOGY
ISSUES***

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Program on Information Resources
Policy (PIRP)

1

My aim in this presentation is to paint for you a picture of the context in which all private and public decisions must be made concerning information and communications. These decisions include strategic and tactical decisions, decisions by businesses and decisions by governments, decisions about marketing, sales, production, control, research and development, and so on. They include decisions by suppliers of information and communications, by consumers of information and communications, and by the referees (private, governmental, or international) to whom the world looks to to resolve disputes.

It has become fashionable these days to talk of globalization, the global economy, global markets, global alliances, global operations, and so on. The implication is that if you fail to go global, you're going to lose in whatever arena you are playing in. There is, of course, some merit to this caution. But the significance of the local has hardly diminished.

Our continuing and essential dependence on the local was brought home to me most vividly and concretely by an experience I had in Del Mar, California, which led me to buy the bright red T-shirt shown on the next slide.

Whole T-shirt photo

2

This slide just proves to you that, yes, I mean a bright red T-shirt!

Front detail photo

- Acme Bar & Grill

3

The specific place where I was in Del Mar was the Acme Bar and Grill. Exactly what I was doing there is not essential to go into!

The key point is that the same bright red T-shirt was the uniform that every waiter and waitress in the Acme Bar and Grill of Del Mar, California, was wearing.

What attracted my attention was not the name and location of the bar, but the wisdom of the message on the back of every one of those bright red T-shirts.

Back detail photo

- Think Globally, Drink Locally

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This message is more serious than might appear at first glance.

It is not improbable that the T-shirts themselves were manufactured in the People's Republic of China, consigned by a Hong Kong distributor to a California retailer who sold them to a California craftsman, who imprinted the shirts for the owner of the Acme Bar and Grill in Del Mar. That's globalism.

But you had to be there to drink. Whenever you are drinking you are drinking in the locality where you are. That drinks are served at all is a matter of local custom and law. The sanitation of the place where you are drinking is supervised by the local authorities. If you get drunk and disorderly it's the local police that deal with you. And the local doctor is your nearest resource if you get ill from the food or the water. That's localism.

The late Tip O'Neill, a famous former Speaker of the House of Representatives of the U.S. Congress, who was also the congressman from the district where I live, used to say that he lived by the advice his father gave him when he started out in politics: "All politics is ultimately local."

My aim here is to sketch how the interplay of globalism and localism shapes the context for decisionmaking about matters of information and communications.

The generic players - 1

- Information and communications suppliers
- Information and communications customers

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As in any other business context, the central players—the people with the primary stakes in information and communications products and services—are the suppliers in that business and their customers.

In developing what I see as the significant relationships between the global and the local, I shall concentrate on these actors and on the nation states where they are based and on the nation states where they operate.

The generic players - 2

- States
- Nonstate actors

6

States remain crucial players. There is much rhetoric about the crumbling of national borders. Two examples are the widespread and repeated claims about the borderlessness of Internet operations and of movements of capital. As I proceed, I shall develop some details to demonstrate the dangers for suppliers and customers of making decisions based on over-reliance on these exaggerated claims. [For additional details regarding global finance, see Ethan Kapstein, *Governing the Global Economy: International Finance and the State* (Cambridge, Mass.: Harvard University Press, 1994.)]

Although I will not offer details on them, nonstate players are of increasing importance in business as well as in military and other national and international security-related affairs. The dangers to business people of random attacks by terrorists, drug dealers and ordinary criminals are the stuff of daily headlines. Russia and other countries splintered from the former Soviet Union offer examples of wider and quasi-governmental roles played by various “mafias” in daily economic life. Almost as diverse but more controlled and orchestrated than the Russian mafias are the various ministerial and provincial authorities in the People’s Republic of China. And multinational corporations themselves are of course major nonstate actors. As other countries see it, the constitutional division of powers among the executive, legislative, and judicial branches of the U.S. federal government and the sharing of authority among the one federal government and the fifty states of the United States all are sources both of bafflement at the complexity of it all and of concern over nontariff trade barriers to non-U.S. businesses.

Players—subjects of in-depth PIRP studies - 1

- Suppliers
 - *Formats and Processes/Infrastructure*: traditional telcos, postal services, computer hardware and software companies, consumer electronics companies and their newer competitors such as voice-over-Internet companies, etc.
 - *Substance*: newspapers, broadcasters, cable companies, book publishers, Web sites, movies, etc.

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In the nearly 25 years of PIRP's existence, our studies have ranged widely over the specifics of the evolution of diverse suppliers of information and communications products and services. This slide lists a sample of the suppliers we—PIRP— have followed over the years and about whom we have knowledge that we can put at your disposal.

As I am sure you all know, the boundaries among these suppliers keep on blurring. The proportions in which these organizations supply *substance* (or content) and the proportions in which they supply *formats and processes* (or infrastructure) keep on changing. What functions are performed by what companies under what industry label and in what relationships to customers, competitors, domestic and foreign governments of various levels, and what international authorities such as the ITU (International Telecommunications Union), the WTO (World Trade Organization), WIPO (World Intellectual Property Organization), and so on, also keep changing.

All this blurring and changing is enabled by the increasingly common reliance of all these suppliers on digital technologies. This observable convergence toward reliance on a common base of digital science and digital technology is often confused with a necessary convergence of industry structures, product lines, markets, regulatory regimes, etc. We at PIRP see no evidence for this, but time does not permit me to dwell further on clearing up this widespread error. I would be glad to do so, however, in response to questions.

Players—subjects of in-depth PIRP studies - 2

- Customers
 - individual consumers
 - financial services industries, especially electronic money
 - entertainment, news and other media
 - military and other governmental bodies
 - etc.
- States
 - Australia, India, Korea, Japan, United States (federal, state and local levels), Western Europe 8

Nor is there any *necessary* convergence among customers. That mattress manufacturers, airlines, and fast-food chains all use electricity in their operations does not imply convergence of their products and services, their industries, or anything else about them. Neither does reliance on digital technologies.

Quite to the contrary, at the level of the individual consumer, there is a tendency toward individualism and idiosyncrasy that ultimately fragments mass markets to markets of one, making the aggregation of markets to a profitable size one of the key problems facing the older, larger suppliers and favoring the smaller, newer entrants into information and communications markets. That, too, is a story I won't dwell on, unless you raise questions about it. But PIRP's sense of its importance accounts for our having invested substantial resources in the study of how individual consumers relate to changing information and communications products and services.

Major categories of business customers are in flux. Their needs for information and communications services differ widely from one to another. Neither I nor anyone can cover the full range of business customers. This slide just samples the samples we have taken. PIRP has, in particular, emphasized studies of financial services industries and military applications of digital technologies. The slide lists countries or regions where PIRP's studies of local/global interactions have been focussed over the years.

PIRP's mission and method - 1

- *Mission:* to provide public and private decisionmakers with
 - impartial background information
 - competent background information

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The range of studies just sketched was and is undertaken in keeping with the mission PIRP set for itself nearly 25 years ago.

My being with you here today is one of the ways in which we share what we learn with our Affiliates (sponsors) and with others in countries around the globe.

PIRP's mission and method - 2

- *Method*: to assure impartiality and competence with
 - diversified sources of money
 - avoidance of anything that would even appear to favor one player over another
 - review of all study drafts by affected players and relevant professions

For more information, see
<http://www.pirp.harvard.edu>

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This slide shows some of the many precautions we take and procedures we follow to make good on our claim that the background information we deliver based on our studies really is both competent and impartial.

For more detail, you may wish to access the PIRP Web site:
<<http://www.pirp.harvard.edu>>

For now, sufficient to say that these studies done in the past 25 years and ongoing now underlie the observations about global/local relationships I am about to share with you, beginning with the next slide.

Wellsprings of global commonalities - 1

- Increasingly faster, cheaper, better electro-optical digital technologies
 - rhetoric of convergence
- Growing interdependence of national economies
 - rhetoric of liberalized international trade policies
- Growing faith in competition vs. monopoly
 - rhetoric of deregulation

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The categories on this slide and the next are derived from an ongoing collaboration between PIRP and Dianne Northfield of the Centre for International Research on Communication and Information Technologies (CIRCIT) in Melbourne, Australia.

The categories themselves are, I am confident, familiar to you. So, I imagine, is the observation that all these phenomena are global in character, affecting even Third World countries. What I want to underscore, however, are certain corollary beliefs that are widely expressed but which, I believe, are mere rhetoric. That is to say, they are insincere, intellectually vacuous, or both.

In describing the wide range of suppliers PIRP has studied, I have already expressed skepticism about convergence outside the realm of science and technology.

As to interdependence, there is no doubt that it is growing, but local differences along many dimensions limit liberalization of trade policies along local, national, or regional lines.

And competition does not necessarily imply deregulation. Indeed, innumerable variations on the theme of regulated competition are reality for most localities, nations, and regions.

Wellsprings of global commonalities - 2

- Growing distrust of “big” government and government spending
 - rhetoric of privatization
- Continuing corporate restructurings
 - rhetoric of acquisitions, divestitures, strategic alliances, etc.
- Increasing sophistication of customers
 - rhetoric of marketing and strategic planning

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Comments similar to those I made about the preceding slide apply here.

Behind the rhetoric of privatization, the patterns of control and the flows of money after may or may not differ much from what they were before. Again, the key point is enormous variation locally, nationally, regionally.

Corporate restructurings indeed abound around the globe, but the divestitures of new acquisitions and the formations and breakups of alliances happen in response to highly localized factors as well.

And although the increasing sophistication of customers is global, the fragmentation and the volatility of markets I noted in describing the customers PIRP has studied make a mockery of marketing studies and strategic plans that wander outside the limits of human inertias, which, like the idiosyncrasies I mentioned, are intensely localized for all but a thin cohort of global elites.

The aim of PIRP’s collaboration with Dianne Northfield of Australia’s CIRCIT is to refine such observations. The plan is “to identify and analyze approaches taken in different nations and compare the outcomes to date, as seen by different stakeholders ... in the development and implementation of policy” about information and communications services.

Wellsprings of local differences

- Presence
- Policing
- Protection
- Piracy
- etc.
- Pricing
- Programming
- Pornography
- Paranoia
- etc.

13

This Eight “P”s expression of local elements that modulate global trends is adapted from one by Michael R. Nelson, former Senior Assistant for Information Technologies, Executive Office of the President of the United States, and now Director–Technology Policy, Office of Plans and Policy, Federal Communications Commission (FCC). These categories are germane not only to information and communications issues but to nearly everything else as well. I therefore don’t think it useful even to attempt to describe them generically.

Rather, in the time that remains, I shall give you concrete and specific illustrations of the interactions between local differences and global trends in the realm of information and communications products and services.

The global and the local in the information and communications industries: *Presence*

- You have to drink where you are
- Authorities for placing cables or antennas and for fighting fires are always local
- The local representative of the global supplier and the local customer are usually hostage to the local authorities
- The on-site rep may be superfluous, but the customer is unavoidably where he or she is

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As I said earlier, that drinks are served at all is a matter of the local custom and law, and if you get drunk and disorderly it's the local police that deal with you.

The control of real estate and fire codes is everywhere ultimately local, no matter what national or international laws and conventions may say. That's why even when bribery is not practiced, some kind of rent-a-local arrangement for revenue sharing is almost always necessary for local success of global enterprises. Along with the widespread increase in customer sophistication, this assures that pressure for adaptation of products and services to local conditions is always present to counter naïve global marketing and planning from headquarters. Communications and information products and services are not immune to what every soft drink manufacturer or drug company knows.

Those who argue that jet planes, telephones, and, most recently, facsimile (fax) and the Internet have obliterated national boundaries must have forgotten the last two points on this slide. At the very least, a protracted period of literal or legal infighting between globalism and localism is unavoidable. U.S. litigation over whether the law of the state the Web site is in, the law of the state the customer is in, or federal law applies to a transaction is but one example.

The global and the local in the information and communications industries: *Policing*

- Local authority is always local but ...
- ...Local authority is not always enough:
 - Terrorism
 - Child pornography
 - Virtual crime
 - etc.

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The main point of this slide, together with the preceding one, is that the global and the local are quite distinct, both are essential, and they are interdependent.

The preceding slide showed that no one can ever escape the local: in that sense, globalism is a fiction. This slide shows why the national, regional, or global are also unavoidably present in local considerations. This classic point is well understood and I need not dwell on it.

A second point that this slide illustrates is how dependent the relationship between the local and the global can be in a given sphere. For instance, the states that export terrorism are not the ones that export child pornography. The techniques for perpetrating either of those activities differ markedly from those for spreading computer viruses or penetrating databases.

Managing the relationship between the local and the global therefore entails bringing many disparate and localized details into global coherence.

The global and the local in the information and communications industries: *Network Protection*

- Physical Security: inherently local (with global support)
- Logical Security: inherently global (with local aspects)
- Reliability: mixed local/global
- etc.

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The various aspects of protecting a network further illustrate why orchestrating various aspects of local/global dependencies into coherence is a demanding managerial task.

Assuring physical security for the people and facilities engaged in information and communications activities is, as for all people and facilities, essentially a policing problem. Both local and global policing are available. Both are undergoing evolution.

The security of systems logic, on the other hand, is a matter of design, engineering and operation. The parties to be managed, internal to the organization or outsourced, are quite different from those involved in policing but kin to those who might deal with reliability.

The policing and the design, engineering and operational elements overlap in the widely disputed realm of application of cryptography.

[For more detail, see Daniel J. Knauf, *The Family Jewels: Corporate Policy on the Protection of Information Resources* (Cambridge, Mass.: Harvard University Program on Information Resources Policy, P-91-5, June 1991.)

The global and the local in the information and communications industries: *Privacy Protection*

- Privacy expectations vary widely
 - from locality to locality, nation to nation
 - from function to function in governments
 - from line of business to line of business
- Privacy protection has
 - small dependence on network protection
 - huge dependence on social norms and legal regime

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Privacy issues involve numerous local political preferences, for instance about civil liberties and individual rights versus communal needs for such purposes as the census, income tax, auto registration, driver licensing, etc.

Privacy issues involve numerous balances between conflicting desires of customers themselves and between what customers want and what suppliers want. For instance, you may want to be on the mailing list of a distributor of business magazines but not that of a distributor of pornographic literature, or vice versa. You may or may not be comfortable with having your bank, your grocery store, your video store, or your airline share information about your transactions with other businesses for marketing purposes or with governments for law enforcement or persecution.

And, because privacy issues have often been exploited more or less cynically by various countries as nontariff trade barriers, there is the additional need to determine when things are as they seem and when not.

Although privacy protection and network protection are logically distinct, they overlap in the thorny area of encryption.

After *presence*, privacy is where globalism is perhaps most tied to local preferences.

The global and the local in the information and communications industries: *Piracy*

- Protection of intellectual property rights to encourage creativity and economic growth
- Free flow and exchange of information

18

Beliefs about the merits of property rights vary across countries. Even where there is a shared belief in property, the balance between the merits of protecting property and encouraging the free flow of information is usually controversial.

As with privacy protection, the innumerable details differ not only from locality to locality but from lines of business to lines of business. What is piracy to a publisher is often information-sharing to a scientist. The rights a movie actor has to his or her work relative to those of the producer differ from those a free-lance writer has relative to those of the publisher of a newspaper. Immigration into the World Wide Web (WWW) of diverse lines of business is highlighting the differences among them and raising the sound level of contention.

The global and the local in the information and communications industries: *Pricing*

- All governments are now big in pricing/costing interventions in telecoms
- Interventions depend on local views of
 - present and future universality of (which?) services to (which?) customers, etc., etc.
 - relative strengths of competitors, etc., etc.
- Therefore, global liberalization everywhere filters through sieves of local inertias

19

The odds are that these ideas are familiar to everyone in this room.

But rhetoric to the effect that deregulation necessarily goes with competition and also to the effect that high-level conventions on trade liberalization necessarily manifest themselves on the street have blinded many to the wealth of local detail that must continue to be mastered by those who would operate effectively globally.

To this, there is no end in sight.

[Relevant PIRP studies and forthcoming publications include: Dianne Northfield, *Drivers of Development in Information and Communication Services: International Experience and Directions*; Kunie Yokoyama, *Voice over the Internet: Fad or Future?* David Goodman, *The Role of Standards in Cellular and Personal Communications Services*. See also: P. H. Longstaff, *Cooperation and Competition: From Biology to Business Regulation* (Cambridge, Mass.: Harvard University Program on Information Resources Policy, Draft Report, December 1997).]

The global and the local in the information and communications industries: *Programming*

- Finance globally, think locally
- Global businesses
- Local content

20

There is, on the one hand, a trend toward larger “media conglomerates,” of which Rupert Murdoch’s News Corporation and Viacom’s MTV are two examples. Both business entities are multinational, global operators. But both have found that, commercially or politically, local content is essential. The News Corporation’s satellite feed into the People’s Republic of China is tailored to Beijing’s sensitivities. MTV tried serving “the global teenager,” but found that it could make money only by developing its programming to appeal to teenagers country by country, not even regionally, as it had expected, for example, in Spanish-speaking Central and South America.

The politics here are both the high politics of cultural autonomy versus cultural imperialism and the familiar low politics of using high ideals to mask protectionist trade policies. Both components are significant, for example, in long-standing arguments between Canada and the United States on this topic.

The global and the local in the information and communications industries: *Pornography*

- The human sex drive is a truly global common denominator
- The boundary between socially acceptable and socially unacceptable expression of the sex drive is about as local a matter as local gets. What's routine in Denmark and Holland is illegal in the U.S. and the People's Republic of China

21

Historically, financing the diffusion of new media has always been aided by people's appetite for sexual materials as well as materials depicting violence.

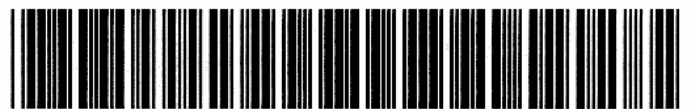
The diffusion of network technologies is no exception. Both Minitel in France and the Web, first in the U.S. and now throughout the world, have been popularized to a significant extent as vehicles for sexually explicit and violent multimedia materials.

In the United States, this stimulated the incorporation by U.S. Senator Exon of an amendment to the Communications Act of 1996 known as the Communications Decency Act of 1996. In 1997, however, the U.S. Supreme Court declared this Act unconstitutional.

As I remarked under the *Presence* heading, U.S. litigation over whether the law of the Web site state, the law of the customer's site state, or federal law applies to sexually explicit material is but one example of the new twists that new technology is adding to an age-old issue.



IGLOBAL



ISBN 1-879716-45-3

The global and the local in the information and communications industries: *Paranoia*

- Comets bring alien space ships along behind them...
- The World Wide Web brings
 - child molesters
 - terrorists
 - crooks
 - etc.
- The Internet is about to collapse

22

Comets have always stimulated irrational fears, and they still do.

Irrational or well founded , the fears induced by the World Wide Web are partly local and partly universal in their nature and seriousness.

What cannot be avoided is the need, once again, to sort out old issues as they well up in a new guise. That this beclouds all the preceding concerns is part of the price of innovation.

Bottom lines for leadership

- THINK GLOBALLY, ACT LOCALLY
- FOR “INERTIAL” LINES OF BUSINESS, KEEP FORECASTING AND PLANNING
- FOR “INNOVATIVE” LINES OF BUSINESS,
 - OBSERVE AND ADAPT
 - MANAGE PROCESSES, NOT OUTCOMES
- THINK AHEAD TO SUCCESS: THAT’S WHEN THEY COME TO GET YOU

23

One consequence of the local/global contentions shown under the Eight “P” headings is that businesses don’t really mature at the pace of pure technological innovation, but at a slower pace resulting from needs to adapt the expression of globally available technology to local preferences—and vice versa.

Indeed, not only do large businesses have their own inertias, but, through old habits as well as sunk costs, so do their customers. In such “inertial” lines of business, it may be a mistake to abandon successful old patterns of forecasting and planning while competing upstarts flounder, sorting out their problems and figuring out how to get profitable, as well as eating up capital.

In the newer, innovative lines of business, however, the old patterns may be inadequate to experiment fast enough and to react fast enough to the issues under the Eight “P”s. Observing what’s happening and adapting to it swiftly may be safer than projecting from the past. And, because it’s impossible to predict how things will actually turn out, managing processes for innovation makes more sense than navigating by wishful outcomes. Finally, competitors attack most fiercely when it’s clear you’re likely to be successful. Many innovators fail to think that far ahead and get stabbed in the chest while patting their own backs. More often than not, the knife is one of the Eight “P”s.