

Analysis for Information Revolutions: Dynamic Analogy Analysis

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Question: *What do the rise of Khomeini in Iran, the Philippines Panama, the Chinese Pro-Democracy movement, the collapse of the Soviet Union, and free elections in Chile have in common?*

Answer: *An unexpected turn of events, and innovative and unexpected use of information technology.*

The unexpectedness might have been avoided if the United States had monitored the use of information technology and had an information technology policy and analysis capability.

Consider the following:

The digital revolution is bringing the power of information technology, once restricted to the world's elites, to individuals and small groups. The list of what this brings is both inspiring and frightening:

- the ability to collect, process, analyze, manipulate, create, reproduce and distribute large volumes of information including politically sensitive or forbidden information.

- the ability to overcome time and distance constraints.

- the ability to evade censorship

- the ability to break the link between information and social and economic class

- the ability to distribute propaganda to large numbers of people in different locations and to use different formats

- the ability to connect like minded people regardless of distance

- the ability to overcome the restrictions of illiteracy through media which does not require print

- the ability for ordinary people to "go around" the gatekeepers

This list is not a surprise but let us look at some cases as examples of how these abilities have been used (from Personal Electronic Media by Gladys D. Ganley, The Washington Quarterly, 1991).

Audio tapes were used by the Ayatollah Khomeini when he was in exile in Turkey, to reach back across national borders to the largely illiterate Iranian population. He was able to build support through sermons and messages which were distributed to religious centers across Iran. This created a core of religious supporters who copied and distributed his message through bazaar merchants, students, members of associations and migrant workers. Thus, despite his exile and his inability to use the regular media, he was able to reach out and build support by using personal communications media.

In the Philippines people used smuggled VCR tapes to get truth about Benigne Aquino's assassination to the people. This eventually toppled the Marcos regime.

Panamanian resistance to Noriega used fax machines and personal computers to get world news back to Panama. Exiled Panamanians translated articles and reset them on Apple computers, with copyright credits and logos and faxed them back to Panama. They also wrote their own articles. Despite this they were unable to unseat Noriega partially because, unlike Iran and the Philippines, their information campaign did not reach beyond the middle class.

The pro-democracy movement in the Peoples Republic of China used phones, personal computers, fax machines, photocopiers, video and audio recorders with cassettes, and the bulletin boards of a vase computer network to get the news out of and into China. Fax originated posters became so prevalent in chinese cities that NBC News President Michael Gartner called them " the wall posters of this generation"(quoted in Ganley, 1991).

In the Chilean plebiscite on the continued rule of General Pinochet. A yes vote would have left him in charge until 1997. The "Command for the No" forces who favored free elections used a combination of personal computers and fax machines to set up parallel communications networks which reported their counts from each of the polling places. Thus, if communications were disrupted on the official system, or if there were discrepancies in the counts the informal network had the data to keep the elections honest.

In the abortive coup against Gorbachev the supporters of democracy were in touch with the outside world through the internet. At one point a post came over the net from Moscow saying they could hear firing and wanted to know what was happening.

In the Soviet bloc during the 1970s and 1980s underground audio and video cassette cultures developed. Pirated tapes of old and politically banned Western, movies, news programs, religious information, and even pornography penetrated the best information control system ever invented. This not only gave a picture of the "outside world" to people but also demonstrated that the central government was not, in fact, all powerful since they could not give the people the world of the West and they could not stop the trade in information.

An editorial in the *Wall Street Journal* (May 6, 1993) quoted Lech Walesa as attributing the differences between Poland and Bosnia to the information policies of the Voice of America. In Poland local news was available in Polish over the Voice of America. This created a situation where people listened to the Voice of America as part of their daily routine. Along with the local news they were receiving global news. This encouraged people to see themselves as part of the global community. On the other hand in Czechoslovakia local news was not broadcast and thus Voice of America is not part of daily life for most people and, more importantly, people do not see themselves as part of the global community. Thus they have little or no concern with how "ethnic cleansing" is playing in Cleveland or Paris.

Nina Totenberg, in an analysis of the situation in Somalia said (Oct 7, 1993, *NPR*) we went into Somalia because American were upset by the sight of children dying of starvation and now we want to pull out because we have seen pictures of Americans being killed.

Our political leaders, in this country, know the power of the media. Our presidents since Nixon have both used and blamed the media for how they have been perceived and how their policies have worked.

We track military build up, economic instability, political rhetoric, demographic movement, energy availability and many other issues in other countries when we want to think about national security. We may pay some attention to what the major news media in a country say, or what the position of the national media is on an issue, or on how that country regards the United States. But it is factored into the analysis of other issues. The information issue is not an issue.

This is partially because we feel helpless in the face of the massive changes which information technology seems to bring and so we are doing denial around the issue of how information access change impacts nations since we don't have any way to think about it.

Because of this denial we are not asking the kinds of questions or doing the things which would allow us to have an effective information policy.

The questions we should be asking are: 1) what should we do as part of foreign policy given that these kinds of information technology intensive interactions are already taking place - what our international communications media policy should be, and 2) how can this kind of information media interaction be used as in a positive way to tie the world closer together and make certain kinds of relations more stable and other kinds of relations less stable or, what should our active stance with regards to information technology?

Dynamic Analogy

I suggest that we create models of the dynamics of previous information revolutions and use these as analogies to guide our thinking on this information revolution. By having this new level of analysis - the analysis of information dynamics - we will be able to answer the questions we need to be asking.

Dynamic analogy analysis has shown that changes in information access because of new information technology has always resulted in the same pattern of economic events - boom and bust - and has always led to a the same pattern of political events:

New information brings new classes of people into the "power equation"

The old players do not know how to deal with the new and a massive conservative reaction sets in

This is ultimately unsuccessful and destabilizing so it is followed by either a period of instability and chaos or a period of reform and restructuring to redesign existing institutions

The ultimate result is a shift from old political, social and economic institutions to new.

This shift occurs either because of economic, social and political changes, or because the country has lost its economic and political dominance. The determining factors in how the change takes place is important for the future of the country. The determining factors can be identified using the dynamic analogy approach. Once the determining are identified we can make choices which allow us to use the power of information to achieve desired ends rather than having a policy based on what is being broadcast on the news.

For example, one of the ways we could act could be based on the observation that there is an inherent risk in information revolutions, and that the risk remains regardless of whether we respond conservatively or with reforms. If we accept this,

we can feel free to act on long range outcomes. Thus, we could establish a policy to use information technology, as indicated by Walesa, to effect change in places like Somalia or in Bosnia. One of the ways to do this might be to require that information tools be distributed along with any other aid we might give. This would begin to bring people into the global information world. This would go far to prevent the Bosnias and Somolias of the future.

If we use dynamic analogy we do not have to be helpless in the face of massive information driven change we can create the conceptual tools to analyze and act effectively. If we use the analytical tools effectively can formulate policy by choice rather than by reaction. This will reduce the likelihood that the United States loose the economic and political dominance it currently enjoys.

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SECOND INTERNATIONAL SYMPOSIUM: NATIONAL SECURITY & NATIONAL COMPETITIVENESS: OPEN SOURCE SOLUTIONS Proceedings, 1993 Volume I - Link Page

Previous	OSS '93 Robert David Steele, Information Peacekeeping: A Note,
Next	OSS '93 Dr. Elin Whitney-Smith, Toward an Epistemology of Peace,

[Return to Electronic Index Page](#)