The Impact of the Northeast Asian Peace and Security Network in US-DPRK Conflict Resolution

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INTRODUCTION

Non-governmental organizations use information and the new technologies such as the Internet in many ways to affect the US foreign policy decision-making process. They use it to mobilize constituencies in large numbers to bring direct political pressure to bear on decision-makers. They use it to alert the media of breaking events. They use it for "witness"-to make transparent abuses of power and to hold governments, companies, or other organizations accountable for their actions.

In this study, we look at the use of the Internet by one small non-governmental organization aimed primarily at the purely ideational level of American foreign policy decision making. The American response to the DPRK's nuclear challenge in the 1990s was a classic instance of the difficulties faced by US foreign policy making in the face of a complex decision. Here, we examine how information provided by a small non-governmental organization fed into that decision-making and affected policy outcomes by introducing new ideas that challenged old thinking about the DPRK.

John Steinbruner argues that the following characteristics define a complex decision in American foreign policy-making:

- More than one important value is affected by a decision;

- Realizing one value is inversely related to the realization of the other values, that is, there are tradeoffs to be made;

- Radical and "structural" uncertainty exists such that neither the rules of the game that generate an outcome

resulting from a decision, nor the probabilities of the outcomes, can be specified in advance of the decision;

- More than one decision-maker is involved, whether individual and/or organizational, who may disagree and must jointly decide what to do faced with the problem.

The DPRK proliferation challenge from 1991 onwards forced the United States to face value tradeoffs in the following relative order of US interests:

1. Global non proliferation regime and IAEA safeguards system *versus* regional and Korean Peninsular stability and/or non proliferation;

2. US unilateral leadership in dealing directly with DPRK *versus* collective security via primarily concerted bilateralism (coordinated US alliances with Japan and ROK) and/or UN Security Council mandates;

3. Contending jurisdictional interests coalescing in "militant containment" and primary reliance on military means*versus* diplomatic power initially combined with nascent cooperative non governmental engagement later;

4. Clinton Administration foreign policy "victory" (at least not catastrophe) in domestic politics *versus* bipartisan and consensual policy removed from party politics in congressional and presidential campaigns.

Not only was first the Bush and then the Clinton Administration confronted with this cascade of increasingly painful tradeoffs to resolve the DPRK-induced crisis; but it also had to make decisions in a state of almost complete ignorance of the DPRK decision-making system, including its structures, personalities, and culture. Consequently, American analysts and decision-makers had almost no certainty as to what would and would not work to either force or to induce the DPRK to comply with American demands.

Worse still, the major institutions of the American state-the executive agencies, the legislative branch, and the "fourth estate"-the American media-were trapped in organizational routines that had worked in the past but increasingly were leading to failure in the present. These organizations were guided by a set of beliefs about the DPRK, which precluded any change in the DPRK. This view excluded the possibility that it simply no longer conformed (if it ever did) to the stereotypical American nightmarish images of the DPRK state. In short, the American state was on automatic pilot in relation to the DPRK for the first three years of the confrontation over nuclear proliferation. As we shall see, with significant exceptions, it remains largely on automatic pilot today with all the attendant dangers.

In the following study, we examine how a small non-governmental organization wielded "informational power" to break up some of the rigid images of the DPRK and to create an information milieu that was more conducive to addressing the underlying motivations for the DPRK's otherwise bizarre behaviors in this period. Before doing so, however, it is useful to spell out some of the informational attributes of the "cybernetic" decision-making process of the American state as depicted by Steinbruner.

The central idea in Steinbruner's formulation is that feedbacks in the decision-process enable decision-makers to avoid the painful process of value-tradeoffs and optimized choice implied by the analytic model:

The cybernetic paradigm, emphasizing that decision makers seek to control uncertainty, pictures a decision maker who makes no calculations of outcome and simply monitors certain information channels, tying his behavior to what is received in those channels via some decision rule.

A small number of closely monitored information flows allow the decision maker to interpret problems by using *rules of thumb (ROTs)*, and to adjust behavior to restore "equilibrium" to the system by following well established routines or*standard operating procedures (SOPs)*. The decision-maker can follow this procedure so long as their *ROT*s and *SOP*s are consistent with the complex environment; and/or so long as the decision-makers can impose their will and are able to force a turbulent environment to conform to their expectations and ignore the informational anomalies that are generated by the exercise of raw power. This decision-making mode is simple and economical, relying as it does on highly selective feedback and ignoring or suppressing most information-especially that which challenges the basic assumptions of the decision-maker.

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The image that springs to mind is the triple-trailer truck moving at 70 miles per hour on a freeway. The driver is concentrated upon survival in the direction that the truck is moving, not with fine-tuning calculations as to how to get from A to B, or whether B should be the objective at all. Constant feedback enables the driver to ignore most information that would otherwise overwhelm decision-making and to avoid grappling with uncertainty at all. The decision-maker will only perceive a narrow range of information, and that will be information consistent with established *ROT*s and *SOP*s that offer decision-rules and action sequences derived from past experience.

Steinbruner spells out explicitly the implication of this account of decision-making for information:

Since the response sequences adjust to a very narrow range of information, most incoming information will be shunted aside, having no effect. This decision maker is not calculating alternative outcomes and will also not be broadly sensitive to pertinent information. He will not engage in a process of updating subjective probability estimates about various states of the world...the spirit of cybernetic logic rejects the analytic assumptions regarding the handling of information and posits a much more limited process. The cybernetic decision maker is sensitive to information only if it enters through an established highly focused feedback channel, and hence many factors which do in fact affect the outcomes have no effect in his decision process.

At some point, however, fundamental changes in the environment or radical discontinuity may confront the cognitive-cybernetic state. Some mountains don't move no matter how hard they are pushed. A bulldozer can push aside many obstacles but still find itself in catastrophic free fall when grinding over an unnoticed precipice. Note that when the bulldozer crests the cliff, all resistance disappears for the moment before the plunge to catastrophe-but this momentary surge of exhilarating power comes too late to allow the decision-maker to shift into reverse and to avoid free fall. One might expect, therefore, that a state operating on cruise control is poorly suited to shifting gears when a change of system occurs in the international environment-such as the end of the Cold War.

Well before disasters erupt, the competent cybernetic decision-maker will start to respond to the changing environment. But in a cybernetic decision process confronted with structural uncertainty-such as existed in relation to the DPRK-this response will maintain simplicity at the cost of an increasingly elaborate, fragmented, and likely inconsistent set of responses to perceived problems-that is, a bureaucratic response based on obsolete decision rules and action repertoires-and arguably the response leading up to the June 1994 crisis. Whereas increasing complexity in the problem environment implies that an analytic decision-making process would seek out new information and options of the kind supplied by NAPSNet, this same challenge faced by a state on "automatic pilot" would unleash a highly circumscribed and bureaucratically bound "scanning" strategy-or set of strategies-by the various agencies handed simpler bits and pieces of the complex problem to "manage."

In such a perturbed situation, the cybernetic decision-making process manifests little learning and a lot of incoherent and even contradictory actions, which amount to a set of probes of the unwelcome environment. These actions in turn generate a set of outcomes that may not be integrated at all. The organizational routines-the *SOPs*-exhibit what Steinbruner calls "instrumental learning" as the agencies seek to avoid failure or disruption in the short-term. Meanwhile, at the top, decision-makers appear to be indecisive or even disconnected from the process. The higher the stakes of failure, the more likely the top decision-makers will avoid risk taking during this phase of "problem solving under conditions of structural uncertainty."

To match evolving complexity with organizational routines, lower-level decision-makers with the most information and experience with their segment of the problem may dominate the overall decision-making process until their *ROTs* and*SOPs* generate such chaos that other options are allowed to compete for attention at the top of the decision-hierarchy. At this time, higher-level decision-makers may be forced to act-and fall back onto basic values or simple *ROTs*-so as to keep their belief structures consistent. In crisis management, there is a great danger that these cognitive strategies will actually suppress anomalous information and evade the need for change of course rather than increase receptivity to it in search of less painful policy options and outcomes.

An essential aspect of *ROTs* is what Steinbruner characterizes as "firm, categorical, non-probabilistic beliefs in the presence of intense uncertainty." Others have termed these beliefs *historical lessons* that guide decision-makers at

moments of truth. (In section III of this study, we will examine the myths that constitute the traditional American paradigm of "North Korea.")

In this process of subjective resolution of prevailing uncertainty, Steinbruner suggests that three mechanisms are critical: a) reinforcement and memory whereby the power and salience of old and young beliefs are shifted by weight and exposure to new information and their relative frequency of use and familiarity; b) management of inconsistency in the mind; c) corroboration from small-group interactions. These mechanisms all act to preserve the decision-maker's mind from corrosive information from outside the belief system. As Steinbruner summarizes the syndrome:

Information-processing operations within the paradigm do not proceed in active pursuit of conceptual change but rather operate to keep such change within reasonably narrow limits. Especially basic problem conceptions-the defined objective, the major options in basic outline, the image of consequences to accrue-should be much slower to change than in the analytic paradigm and should be driven to it only under considerable pressure.

Following Steinbruner, we expect to observe the following in our case study of NAPSNet or the Northeast Asian Peace and Security Network in relation to the DPRK in the 1990s:

1. High-level American decision-makers relied primarily on traditional, official sources of information in making decisions on how to respond to the DPRK's challenges. They did not seek out external or new sources of information to explain the DPRK's behavior. Their prevailing paradigm as to the DPRK was confirmed and reinforced by continued monitoring of the DPRK's "old bad ways" such as DMZ provocations, an endless stream of abusive propaganda, submarine incursions, missile firings, even if these indicators were consistent with alternative accounts of DPRK motivations.

2. Low-level American officials were more receptive to external or new sources of information, particularly those at the operational level of negotiating with the North Koreans or responsible for evaluating alternative courses of action to the higher level decision-makers. They were more aware of the fragmenting and incoherent actions and resulting outcomes resulting from American policies in the lead up to June 1994 and of the need for a new foundation for an alternative policy in the lead up to the Agreed Framework in October 1994. They were particularly interested in indicators that the old paradigm could not explain.

3. Some-but not all-of the new information available in external suppliers of information-was actually available already via official channels but had not been noticed. Some-but not all-of the implications arising from this new information had been inferred from other old types of information available in insider channels. The impact of new and externally supplied information arose mostly by confirming the revised views of insider heretics who were already fighting against the conventional wisdom as to DPRK motivations at lower levels of the agencies involved in policy including the State, Defense, Energy, Treasury, and Commerce Departments.

4. In the period of maximum confrontation in mid-1994, the most urgent need inside the state flying on automatic pilot was for urgent wake up calls from the outside, and provision of analysis and information that buffeted the established belief system. At such times, innovative analysis and hard data were the most potent information tools available to the outsider communicating with the adaptive low-level insider not trapped in "groove" thinking.

5. Information suppliers that overcame the three conditions outlined by Steinbruner for the conservation of old ways of thinking slowly but surely eroded the barriers to cognitive change, and allowed analytically-based policy options to emerge to the forefront of decision-making. They did so by increasing the ratio of new to old information, highlighting inconsistencies, and validating new views by having them enunciated by established thinkers or juxtaposed with them.

We will argue in this study that the Internet has created the opportunity for upstart start-up organizations to play important roles in American decision-making on a critical foreign policy issue. In particular, we will suggest that non-governmental organizations with sufficient resources and stamina can constitute new *information milieu* and can create new forms of *consensual knowledge* that can diffuse into the decision-making apparatus, change perceptions, and feed directly into the formulation of policy options.

Conversely, we will also conclude that not much has changed due to the new information technology in the structure of decision-making at the top. It remains largely insulated from the direct effects of

non-governmental use of the new information technology. The effects are mostly indirect either via other intermediaries (the media and think-tanks insider the Beltway) or via proliferating information channels feeding into lower levels of the state. At particular moments, however, the information power exercised by well-informed non-governmental organizations can be used to insert knowledge into the minds of uncommitted policy analysts and decision-makers, and thus move mountains. We shall argue that this is exactly what happened with NAPSNet in relation to the review of US policy toward the DPRK in 1998-99.

In section I of this paper, we first outline the history of the Northeast Asian Peace and Security Network (NAPSNet). In section II, we describe its rapid growth, and the diversification of its services to a transnational network of government officials, journalists, scholars, and others. In section III, we describe the basic system of myths that were recycled by the American media and reinforced the conventional prejudices of American decision-makers before moving onto how NAPSNet provided critical information and analysis at key junctures. In section IV, we conclude with some observations concerning the future of non-governmental use of new information technology, and some strategic implications of the NAPSNet experience.

I. GENESIS OF NAPSNET

The groundwork for NAPSNet arguably was laid in the 1984-87 period when Peter Hayes was active on the issue of nuclear weapons on the ROK. This work-which became famous (notorious if you worked at US Forces Korea Public Affairs Department) stimulated the North Koreans to invite Hayes to visit the DPRK. Eventually, this visit took place in September 1991 using funds previously granted by the W. Alton Jones Foundation and Ploughshares Fund. His visit to Pyongyang led to a very detailed trip report outlining the discussions and a published account that gained attention in official circles in Washington and Seoul due its timing (immediately after the Bush announcement that US nuclear weapons would be withdrawn from forward deployment) and the unusual access granted to Hayes by the North Koreans.

After moving back to the United States from Australia in July 1992, Hayes went on a second trip to the DPRK in November 1992. This time, he wore a UNDP official hat as a technical consultant on DPRK greenhouse gas reductions under the new Climate Change Convention negotiated earlier that year in Brazil.

In October 1992, Peter Hayes contacted Al Binger at Rockefeller Foundation on the recommendation of other peace and security donors. Binger passed the call onto Tom Graham, responsible for the Foundation's Peace and Security Program. In early 1993, Hayes submitted a two page "concept" paper on work to promote a Northeast Asian nuclear free zone, emphasizing prior contacts in the region and the role of regional partners. This concept paper was put on hold until March 1993 due to Graham's travel.

It was pre-empted on March 12, 1993 when the DPRK announced its intention to pull out of the Nuclear Non Proliferation Treaty, thereby unleashing a long train of confrontational events with the international community, most especially, with the United States.

In April 1993--in response to a faxed invitation to return to Pyongyang to discuss the nuclear issue and received on April 3 from the DPRK party contacts--Peter Hayes requested Rockefeller to fund this trip, followed by briefings in Seoul and Washington. On April 6, 1993, Tom Graham first apprised then President of Rockefeller Foundation Peter Goldmark of Peter Hayes' work on DPRK and the pending opportunity to support work to scope out confidence building measures with DPRK

in Pyongyang, Seoul and Washington. On April 16, Rockefeller confirmed a grant to Nautilus Institute to fund an "NGO visit to, and communications with, DPRK," enabling the trip to proceed in early May.

In marathon briefings to Hayes in Pyongyang in May 1993, Kim Yong Sun, then head of the International Affairs Department of the Korean Workers' Party, asserted forcefully and more than once that US-DPRK high-level talks were badly needed and would be a positive development. In making his point that it was possible to solve the nuclear issue by direct dialogue, he stated a Korean proverb: "Sword to sword: rice cake to rice cake. It is time to throw away the sword and hold up the rice cake." Kim Yong Sun went on to say: "No one can be sure that one day that the United States and the DPRK will not become allies like the United States and the UK, or not ally, but close friends. The history of nations, as I have told you before, is one of making friends who later become hostile. Now is the time for the US to make a change in our direction...Perhaps the first and foremost way to establish trust and to ease distrust would be a dialogue."

Hayes also passed to Kim Yong Sun some questions and comments prepared in Seoul by the staff of the then Minister of Unification, Hong Koo Lee. After his return, he published Kim Yong Sun's views in article in *Sisa Journal* in the ROK, and conducted briefings in Seoul.

After returning from the DPRK, Peter Hayes responded to Tom Graham's challenge to develop a "coalition" approach that would approach the core of the problem of the DPRK nuclear threat from a number of oblique angles. Hayes developed a concept for a "pincer strategy that deals with 1) alliance politics and 2) Washington politics." The strategy envisaged engaging players from across the political spectrum from left and right liberals to conservatives in the United States. He entered a caveat that there are limits to coalition-building, noting that in the case of forward-deployment of nuclear weapons, high-level American decision-makers eventually went around right-liberal opponents to impose a policy of withdrawal of tactical and theater nuclear weapons in 1991-92. "First and foremost," he insisted, "we need the right ideas that frame the issue."

In July, the basic concept for NAPSNet was developed. Hayes had in mind to create a catalytic and creative network, not a self-perpetuating organization. As he noted in one communication, "An institution with big boots, brass plaques and plate glass windows may evoke competitive envy rather than collaborative cooperation at this early stage." Throughout August 1993, he communicated with Tom Graham at Rockefeller Foundation on the design of a network, leading to submission of final proposal for funding on August 30, 1993. The proposed network was intended to be transnational, strictly non-governmental, and to "represent the diversity of views and nationalities within the region."

From the outset, the network was envisaged to stimulate intellectual product on a range of issue bearing on the nuclear challenge posed by the DPRK including sanctions, military options, Korean and regional nuclear issues, and regional confidence-building. As Tom Graham, the Rockefeller Foundation official backing the innovative network wrote in July 1993, NAPSNet was to rely only 40 percent on Nautilus' in-house expertise on the DPRK and 60 percent on other players to make the network viable. Graham had independent experts such as Gerald Segal at the International Institute of Strategic Studies in London review the concept before proceeding. Key to Rockefeller Foundation's confidence in funding the proposed initiative was Professor Robert Scalapino's agreement to informally advise NAPSNet-which he has continued to do to this day. In September, the name of the network was changed from *Northeast Asia Security Network* to *Northeast Asia Peace and Security Network* to connote "a positive approach not necessarily confined to military-security issues." The project was to commence in November 1993 on a "proof-of-principle" trial basis until May 1994.

In July 1993, State Department personnel deeply involved in analyzing the evolving conflict with the DPRK told Hayes that "they need urgently an analysis of North Korea's energy situation and whether nuclear technology such as a LWR makes economic sense or not." This led Hayes to commence systematic research on the topic, including the preparation of a paper on the transfer of light water reactors to the DPRK for use in Pyongyang. In September 1993, he agreed to travel back to the DPRK as a consultant on environmental issues. In part, he did so in order to secure DPRK participation in some capacity in NAPSNet.

In October 1993, Peter Hayes made a trip to the DPRK as a Global Environment Facility consultant funded by UNDP. After escaping from Ministry of Foreign Affairs control and isolation in a grim "VIP" hotel outside of the capital city, he met again with Kim Yong Sun for wide-ranging discussions on the nuclear issue. This second trip for GEF/UNDP also provided insight into many energy and environmental issues in the DPRK.

On this trip, Hayes spent five hours with Kim Yong Sun discussing many issues in detail. At one point, as he was explaining why a light water reactor would not work in the unreliable and small North Korean power grid, the lights went out. The conversation continued in pitch dark for half an hour as if nothing had happened until the power came back on. At these meetings, Kim Yong Sun reiterated two or three times that he adhered to pragmatic realism as the basis for foreign policy and a new relationship with the United States. Asking that his remarks be relayed back to US officials-which they were-he stated:

There is no reason why the DPRK and the United States should remain at odds. There are no forever enemies, no forever friends. Korea is a small country surrounded by big powers. It's in the United States and the DPRKs' interests to maintain the US position in the region, to deter too much influence of a "certain power" [Japan] in the region.

On October 11, 1993, Rockefeller Foundation made its first grant to NAPSNet to fund the first phase. followed by further grants on December 22, 1993, April 25, 1994; and May 5, 1995. Nautilus aimed to establish:

...a transnational, non governmental network to engage a wide range of policy thinkers and security intellectuals in developing exploratory ideas and policy responses that supports nuclear non proliferation in the Northeast Asian region; to generate a vision of the regional security framework within which the current vexing policy dilemmas can be resolved by using email and traditional communication means to commission papers, distribute product, build media coverage of product, and solicit and expose a wide range of opinion from the region.

The original NAPSNet concept in the October 1993 grant included regional partners in Japan and an international advisory group (Inoguchi Takashi, Tokyo University, Bob Scalapino, Dingli Shen, Kim Kyung Won, Alexander Zhebin, Kim Song) to guide its work. Practically speaking, guidance came from a much wider group, as well as from Tom Graham at Rockefeller Foundation whose political instincts were unerring.

Critical to the original network concept as presented to Rockefeller was the creation of unique intellectual product. Thus, NAPSNet began immediately to produce a stream of in-house studies by Hayes and commissioned a set of expert papers. The stream of analysis, which accompanied the Daily Report quickly, established NAPSNet as a source of well-informed and often unique knowledge about North Korea as its nuclear challenge exploded onto the public agenda.

Drawing on his direct knowledge of the DPRK, Hayes also contributed in November 1993 to the Asia Society "briefing book" on policy options for engaging the DPRK, edited by Scott Snyder by

producing four analyses of key issues in potential international collaboration with the DPRK on economic, environmental, energy, and nuclear technology issues, which were incorporated into the report commissioned by the Rockefeller from the Asia Society. In November, he also published a paper on the issue of transferring a light water reactor to the DPRK for the Carnegie Endowment for International Peace in Washington DC. This carefully argued and technical paper caused influential figures in the liberal non-proliferation establishment such as Sandy Spector to take a closer look at what appeared superficially to be an absurd proposition.

On November 30, 1993, Hayes initiated communication with US Government concerning transfer of a computer to enable NAPSNet counterparts in the DPRK to receive NAPSNet product. After much review, Nautilus was authorized in May 1994 by the US Commerce Department to transfer a 386 IBM clone desktop computer to the DPRK. This became the first of three computers transferred to the DPRK (more precisely, two more 486s were approved in years following for "export" to the DPRK UN Mission in New York).

Starting in December 1993, NAPSNet began to publish a stream of specialist papers on political-military, nuclear, energy and environmental subjects related to the DPRK (See attachment 2 and the next section). The authors were from across the political-spectrum from left-liberal at the East West Center (favoring environmental dialogue and engagement of the DPRK) to conservative-right (analyzing military options against the DPRK). Most remarkably, the Institute published three papers on the possible transfer of light water reactors to the DPRK, by a well-known anti-export member of the non-proliferation establishment in Washington (Victor Gilinsky), by a former head of General Electric's reactor division (Sal Levy), and by Nautilus staff (Peter Hayes, with detailed and explicit analysis of the obstacles involved in such a transfer, as well as an analysis of the fuel cycle and plutonium-arisings from such a transfer).

Hayes also began to write for the scholarly security community, starting with an essay in the widely read Bulletin of the Atomic Scientists. He attended the annual Carnegie Endowment meetings on non-proliferation, and at the 1993 panel on North Korea, he introduced the concept that the DPRK was not monolithic and might be negotiated with to a cross-section of the Washington high priesthood of non proliferation policy. He explained the nature of decision-making in Pyongyang on the nuclear issue to readers of the Livermore Lab series on proliferation after giving a briefing to analysts at Z-Division. During this period, Hayes also wrote an irregular column for *Sisa Journal* in Seoul. These articles were read closely in South Korea.

On January 25, 1994, Nautilus appointed a former State Department intern at Intelligence and Research, Young-In Park, to represent NAPSNet and to report on the media coverage of the DPRK issue in February for six months. Park's work thereby relieved Paula Fomby, Nautilus staff in Berkeley, from writing the raw materials for the Daily Report which began in December 1993. (She remained editor responsible for assembling the feeds from the ROK, Japan, and Washington). Initially called *the Washington Report* and distributed by email, Park's section described briefly key US official statements and testimony, media and oped pieces, and other important events such as speeches, conferences etc. Park also produced a weekly report, *Washington Insight,* that was sent only to Network advisors. In August 1994, Dana Fisher took over from Paul Fomby in the Berkeley office, and Steve Noerper replaced Park in Washington in [**check date]** after Park left in September 1994.

In addition to providing the daily feed of American news summaries for international distribution in the assembled Daily Report issued from Berkeley, Noerper represented NAPSNet in Washington DC for eighteen months before departing for a position at the East West Center and later, CINCPAC's Asia-Pacific Center in Honolulu. He made it his business to attend think-tank and quasi-official sessions, as well as to be closely in touch with congressional aides and government officials. In the

first half of 1995, for example, he attended over forty workshops or conferences dealing with the DPRK and/or ROK in Washington DC. In each case, he promoted the *Daily Report* personally to candidate recipients in Washington in an attempt to ensure that key individuals in all the major information-processing institutions were receiving NAPSNet services. [**check number in report**] He was also one of the small group of younger Korea specialists in Washington based at Korea Economic Institute, US Institute of Peace, and Korea Society who were busy around town countering some of the worst excesses of the orthodox think-tanks.

In early 1994, NAPSNet generated substantial media coverage. One report noted that the project's products had been cited in many US newspapers, National Public Radio (3 interviews), *Newsweek*, *TheWall St Journal*, and that background information was provided to NBC Nightline, CBS Evening News (including an aired interview with Tom Martin), McNeil-Lehrer Newshour, BBC, and the Australian Broadcasting Corporation.

In March 1994, Peter Hayes produced a study on North-South cooperation and confidence-building for UNDP. This project also included convening a meeting in New York at UN headquarters of American experts on Korea and began a process of linking UN staff informally to networks of American expertise in promoting cooperation rather than confrontation with the DPRK. Later in 1994, NAPSNet provided the UN Secretary General with a briefing package on the nuclear issue prior to his visit to the ROK/DPRK in December. [check date of boutros ghali visit to DPRK] Finally, in February 1995, the ROK Government officially adopted the recommendations, and they were forwarded to Pyongyang.

As dark clouds gathered in April 1994, he wrote a study on the likely inefficacy of sanctions against the DPRK. Entitled*Defiance Versus Compliance: The DPRK's Calculus Faced With Multilateral Sanctions,* the report showed why the DPRK would be unmoved by the prospect of sanctions, and that its interests in complying with international norms were weak. He predicted that the DPRK would remain ambivalent about compliance so long as inducements remained so marginal and incentives to proliferate remained so strong. As the analysis was contrary to the belief system of most officials in Washington, it had likely had little impact although it was prescient and prefigured the October 1994 Agreed Framework.

In May, he undertook a third mission to the DPRK for UNDP. This mission ended abruptly when, on May 28, UNDP was told that he was a "non neutral" person whose writings about the DPRK were "unreasonable" and "uncomplimentary." He was blackballed by the DPRK Foreign Affairs Ministry from getting an entry visa for the next four years. Ironically, this shut-out also delayed a $10 million GEF grant to the DPRK on reforestation so that it became snagged on domestic budget politics in 1995-96, leading to its needless demise.

Also in May1994, a mission of American foundations visited Pyongyang with Kim Yong Sun as their host. The discussions led to an understanding with the DPRK counterparts that American donors would fund projects in the areas of cultural exchange, agriculture, internet communications, and energy. The first three areas were understood to fall in Rockefeller Foundation's purview, and the fourth to be the concern of the W. Alton Jones Foundation. However, various setbacks, confusion as to which channel would be used to communicate with Pyongyang on the energy work, and organizational politics in the United States led to a two year long stasis in implementation of non governmental collaborations on energy issues in the DPRK. This logjam was not broken until late 1996 when Nautilus resumed direct communications with counterparts in Pyongyang to define candidate non governmental energy projects.

In mid-1994, Hayes made an explicit decision to write less on security issues and to focus more on functional issues where Nautilus had a comparative expert advantage-especially on energy and

environmental issues in the DPRK and the region-and utilizing private meetings and briefings rather than published articles. In April 1994, he shared sensitive data on background with American officials in the State Department who were striving to understand the DPRK's economic and energy dilemmas. In July-as the efforts by the United States to impose sanctions increased tensions to a state of near war, Nautilus convened a small conference cosponsored by the East-West Center and held at its headquarters in Honolulu between17-19 July, 1994. At this event, many of the networks writers and key analysts met for the first time. Although no DPRK participants attended, Kim Yong Sun wrote a letter to the participants from Pyongyang which noted that: "I am very thankful to you for the daily reports on peace and security situation in Northeast Asia issued in the US which I believe will undoubtedly be a resourceful help to our work."

Briefing to Carter after his June visit to DPRK; earlier paper on eve of his departure. [find details]

About the same time, NAPSNet also acquired its first writers in the region. Janice Heppell, an independent Canadian arms control analyst based in Seoul who Peter Hayes met at a UNIDIR workshop held in Seoul and hosted by the ROK Foreign Minister Han Sung Joo, agreed to serve as NAPSNet representative. Heppell was appointed in June 1994 to write the ROK part of the *Daily Report*. In 1995, she left the ROK and Tim Savage, then at the Academy of Korean Studies, took over until he too left Seoul in 1996.

In September 1994, NAPSNet requested the Sasakawa Foundation in Tokyo to forward-fax the Daily Report to Pyongyang. This procedure continued for the next two years. Also in September, 1994, NAPSNet hired a freelance writer in Japan, Edith Terry, to cover Japanese media and analysis related to the Korea crisis. Terry had been working out of Sasakawa and was identified by the foundation. After only a short time, the coverage proved too expensive and burdensome, and was replaced by coverage by a Japanese intern [name] in the Washington office supervised by Steve Noerper, and utilizing the Internet to review the Japanese media in "real-time." [when did GLOCOM take over? Must have been after ESENA began, in 1997?]

At the same time, the Institute was growing. It had commenced an effort to conceptualize, fund and implement "energy and environmental security" strategies in region. This led Nautilus to make its first connections with Stephen Bosworth, then President of US Japan Foundation, later head of KEDO, and now Ambassador to ROK.

In July 1994, Nautilus staff provided a set of options to State Department for functional engagement of the DPRK on energy and environmental issues. This memorandum argued that: "It would be to both sides' advantage to include in the next round's communique a mutual commitment to initiate non-governmental exchanges (scientific, cultural, technical assistance/developmental) as a safety net."

In August 1994, Nautilus staff provided energy calculations for Korea Desk at the State Department as background to discussions of heavy fuel oil in the Agreed Framework negotiations.

October 1994, as the US-DPRK Agreed Framework is being negotiated, Nautilus convened a ROK-DPRK workshop on sustainable development, hosted by the Focus Institute at Chulongakorn University in Bangkok. Five north and five south Koreans turn up. Starts NAPSNet relationship with Moon Chung In at Yonsei University, which eventually led to Yonsei taking over production of the ROK report in August of 1996. Henceforth, research effort shifts to focus on identifying options for cooperative non-governmental engagement under the Agreed Framework, while sustaining and improving NAPSNet's established services.

In December 1994, the Institute produces a technical analysis of the likely difficulty that the DPRK

would exhibit in absorbing the heavy fuel oil that the United States was committed to supply under the Agreed Framework.

In December 1994, a US helicopter strayed north of the DMZ and was shot down. NAPSNet provided to Korea Desk at the State Department the text from the US Forces Korea 1978 *Command History* describing how the last such incident in 1977 had been resolved. David Brown, then head of the Korea Desk, reads it over an open phone line to Dick Christenson, the official accompanying then-congressperson Bill Richardson who was attempting to get the surviving pilot released by the North Koreans. Peter Hayes wrote a rare commentary in the *Daily Report* aimed at DPRK readers of the Daily Report, stating:

US officials believe that with every hour that passes, North Korea is losing

the opportunity to make this unfortunate incident contribute to the building of a new relationship with North Korea, rather than a new irritant that may even threaten the smooth implementation of the US-DPRK agreement.

This was the sole use of NAPSNet's *Daily Report* in crisis management in its entire history.

In January 1995, Nautilus commenced in-depth energy modeling work on the DPRK, drawing in expert researcher David Von Hippel. This effort leads to a series of technical studies over next two years that established Nautilus Institute as primary locus of studies on this topic in the DPRK. In February and March 1995, Nautilus staff provided Robert Galluci and David Brown at State Department with two concepts for cooperation with the DPRK, one to support a UN forestry project funded by UNDP and the Global Environment Facility in the DPRK, and the other to initiate a study within the US Government on DPRK energy issues.

Alexander Zhebin, former TASS correspondent in Pyongyang for nine years during the Cold War, was recommended by Nautilus Associate Alexander Mansourov. Zhebin was hired in December 1995 and wrote the Russia report on contract until January 1996. NAPSNet equipped him with a laptop computer and trains him on email and writing guidelines to enable him to file a digest of Russian news coverage and specialist analysis from Moscow. In May 1996, [name, Bhazanov? check dates] took over the Russian section of the report, and also starts to file the *DPRK Report* on a monthly basis, a summary of expert Russian views on current topics in the DPRK.

Dana Fisher conducted first reader survey and created first Profile Directory in first quarter 1995. Fisher left in 1996, but made crucial early recommendation that Nautilus Institute create a home page, and cobbled together one first using a friendly non profit server based in Washington DC, and later on a commercial service provider. Dana Fisher's choice proved a wise one and put Nautilus ahead of the information curve in that NAPSNet simultaneously ran a listserv in conjunction with a web service, enabling us to operate a multi-tiered service that was suitable for readers wherever they were located in cyberspace.

In January 1997, Wade Huntley was hired and created the first true Web version of the *Daily Report*. Nautilus elected to maintain a two tier web and email distribution system; Huntley tightens the reporting; transition to new Yonsei writer via Chung In Moon; new Japan writer via partner on energy-env. Security projects, GLOCOM; fire Zhebin, Moltz finds and funds new Russia writer; we fail to get JPRS/FBIS and Current News access; funding secured for Abolition project focused on Japan and ROK, and Savage hired as relief for WH once Ford funds secured.

Also in 1997, create Policy Forum On-Line with partial success. Role of SF in web design and promotion at this time, moving toward increased professional support in Institute for information

systems (culminates in Julie Haugen hire).

In 1998, partnership with Yonsei ends; International Policy Studies Institute at Korea University recruited as replacement, through mediation of Han Sung-joo.

Other Issues and Difficulties [to come]

NAPSNet as an internal model in the Institute for Internet services; and as an external model (eg South Asia and Non Nuclear NATO Networks); tabulation of comparative services and web sets

Getting access to FBIS/JPRS in meaningful way

Annotation of Daily Report to show how news read in DOD

Politics and difficulties of having NK coverage and "balance;" also, getting DPRK writer Kim Myong Chol approved, but not activated in major way.

Balance of news coverage at a glance for the generalist and in-depth coverage of events for specialist.

Coverage of ROK alternative voices; of non-English media; of non-written media-only papers for most part

Institutional partners take over, self funding in Japan, Russia, ROK; not China. Hoped would be portal in each country not just via Nautilus and NAPSNet, but only limited success in realizing a distributed Web-network.

II. DISTRIBUTION OF NAPSNET INFORMATION PRODUCTS

In Section I, we explained the genesis of NAPSNet. In this section, we focus on the actual informational products of NAPSNet from its inception in 1993-4 up to today.

In March 1994 at the end of the pilot phase under its first Rockefeller grant, NAPSNet reported that:

About 800 persons were advised of the launching of the Network; about 450 potential participants have been sent Network products and registration materials twice. To date (March 94) about 150 persons from 12 countries have registered with the Network; of these, about one-third (50) are email users. The registration is expanding at about 3-4 new participants *each workday*--or about 15-20 per week. We anticipate that registration will continue to grow for the next three months, and will plateau at about 5-600 participants.

In September 1994, 442 requests for information had been received, 152 "NAPSNet papers" had been mailed out, and 85 email recipients were registered and were getting the Daily Report, while 4 recipients including 1 in the DPRK were getting it by fax. By December, electronic recipients had grown to 141, with 27 via fax (mostly in Washington to US Government agencies unable to receive email at all or on classified public networks).

In January 1995, the *NAPSNet Mid-Term Review* noted that 154 recipients were receiving papers and the Daily Report via email and 30 by fax. This review noted that Nautilus Institute intended to diversify its electronic information services by starting networks on trade and environment, which was later launched as APRENet. It also observed that there were limits to electronic distribution in

this early phase of the Internet:

Our readership continues to expand, partly because NAPSNet is becoming well known among specialists as the authoritative source; and partly because the community of potential users who are connecting to the Internet is increasing rapidly-albeit at varying degrees depending upon country and institutional base. In the ROK and Japan, for example, desktop e-mail connectivity is still relatively rare, but in both countries, e-mail backbones are being built rapidly and the desktop PC-oriented work culture-with its inherent potential for individual e-mail connectivity-is taking root. Government officials in most countries serviced by NAPSNet are poorly represented.

Also, many officials in various countries prefer to rely on existing official information services rather than NAPSNet. Their e-mail connections are usually institutional rather than personal and immediately accessible, raising the time-cost of their use of NAPSNet. And if they work in offices dealing with classified information, they may be unable to find an interface with commercial e-mail nets. As one US intelligence official [one of the best albeit low-ranking DPRK analysts in the US Department of Defense] told us:

I'm almost embarrassed to tell you my frustrating tale of the search for a...electronic network interface. We apparently are the hub of the most sophisticated electronic inter-connectivity the world has ever seen, unless you want to access Compuserve or its ilk. I went to an in-house "town hall" on the intelligence community and unclassified databases and heard about the staggering sums being invested in developing approaches and plans and strategies, but apparently actually buying a few modems from the local Computer World is still an out-year kind of thing. But please keep me informed about the Network. It is far too easy to become a victim of one's paradigms when dealing with Northeast Asia these days.

As of November 1995, the email NAPSNet network continued to grow. Daily e-mail distribution of the *Daily Report* had reached about 270 and growing. According to the NAPSNet *Directory of Participants* published in Fall 1995 (see Table 1), the email recipients had risen to 277, with 48 recipients still demanding faxed copies (46 of whom were in the United States, and 2 were in the DPRK). By late 1977, when the next reader's survey was completed, registered email users had risen to about 784 registered recipients of the Daily Report in 27 countries. By December 1999, this figure had grown geometrically to 1,957 registered email recipients of the Daily Report and other NAPSNet email services.

Table 1: **Distribution of NAPSNet Daily Report and Papers: 1994-96**

Country	Email Daily Reports/Papers				Faxed Daily Reports/Papers		
	Sep-94	*Jan-95*	*Fall-95*	*Feb-96*	*Sep-94*	*Jan-95*	*Fall-95*
Argentina				1			
Austria				1			
Australia	3	9	13	17			
Brazil				1			
Canada	3	5	8	10			
China	1	3	2	20	1	1	
France				2			
Germany	1	1	4	7			

Holland			1				
Hong Kong			1	3			
India				2			
Indonesia				1			
Israel			1	2			
Japan	3	19	12	44	2	2	
Kazakstan				1			
Malaysia				1			
Mongolia				1			
New Zealand			2	3			
Norway			1				
North Korea					1	1	2
Pakistan				2			
Philippines			2	1			
Russia	3	3	5	6			
Singapore				1			
South Africa				1			
South Korea	2	9	12	42			
Sri Lanka				1			
Sweden	1	1	2				
Switzerland			1	2			
Thailand	2	2		1			
United Kingdom	5	5	6	18			
United States	61	91	207	393		26	46
Totals	**85**	**148**	**280**	**585**	**4**	**30**	**48**

Sources:September 1994: D. Fisher, "The Northeast Asian Peace and Security Network," dated December 2, 1994. The table from the data is drawn about distribution is an attached table dated September 1994.January 1995: P. Hayes, D. Fisher, *NAPSNet Mid-Term Review*, January 1995, p. 6.
Fall 1995: NAPSNet, *Directory of Participants*, Berkeley, Fall 1995, p. 2.
February 1996: NAPSNet, *NAPSNet Member Profiles*, internal memorandum. We estimate that this memo may overstate number of email recipients by up to 30 % as it does not separate email from non email service. We have therefore corrected the total used in Figure 1 to 410. The difference is the on-going fax distribution of the Daily Report in Washington DC, and registered users not on email or fax, especially non-US registrants.
Note: The registered recipients does not equal the actual readers. As the 1997 reader survey discovered that on average, NAPSNet recipients were forwarding to an additional 3 readers.

The 108 percent annual growth rate of the Daily Report readership over its six years of publication is shown in Figure 1. This astonishing growth in readership shows no signs of slowing. Indeed, systematic promotion and publicity over the coming year is

Note: Total users in month 26 (Feb 96) is calculated per note in Table 1.

Note: Total users as of December 1999 is 1957

expected to double or triple the readership (see below).

Reflections on competitors: *Comparisons: Governmental and NGO Competitors: NAPSNet* is not the only game in public, non governmental cyberspace-there are: the unclassified version of JPRS-FBIS; various non proliferation information services; various regional information services; various expert profiling web services for Asia scholars, etc. High ranking government officials also use classified information services and are insulated systemically against NAPSNet type services unless they make a special effort, usually private, to obtain it (some have). We will identify our strengths and weakness relative to these competitors for attention and how our value added compares (or could)

DPRK Internet Connectivity and NAPSNet

Of particular interest are the efforts made by NAPSNet to ensure that the Daily Report and NAPSNet-distributed analyses were available to relevant parties in Pyongyang. Until early 1995, there was no telecommunications connectivity between the United States and the DPRK due to American sanctions. As mentioned earlier, this obliged NAPSNet to make arrangements with third parties (in Japan) to forward-fax printed versions of the emailed *Daily Report* to Pyongyang. In preparing for the one non-UN mission to Pyongyang, we also used digital cellular forwarding phones in Australia on a prearranged schedule to either send faxes or to phone direct to Pyongyang from the United States. Recognizing the high cost and the desirability of electronic connectivity for both NASPNet, we began to explore electronic options.

As there was no Internet in the DPRK, the technical route to achieve electronic transmission of messages to and from the DPRK required use of a phone line-which would be difficult from the United States. NAPSNet discussed a coordinated approach to realizing this objective with International Physicians for the Prevention of Nuclear War in Boston. Nautilus obtained a permit from the US Government to transfer a 386 desk-top PC to the DPRK (but not a modem as this could not be exported legally from the United States). The IPPNW arranged for its Swedish affiliate to transfer the requisite modem via its Malaysian affiliate to the DPRK counterpart of the desk-top PC supplied by Nautilus. IPPNW in Australia offered to train the DPRK counterpart in the use of direct-dial telephone email connectivity, using IPPNW's Satellite software. This architecture would have had NAPSNet send its materials over email to the Australian affiliate, who then would have called the Pyongyang-based PC over phone lines on a pre-arranged daily schedule. At this point, the planning stalled, primarily because of inaction within the DPRK.

Nautilus then opened a separate channel with the DPRK to realize the objective, this time with the DPRK UN Mission in New York. In 1995, with US Government approval and funding from the Rockefeller Foundation and Rockefeller Brothers' Fund, NAPSNet reached agreement with the Mission to train personnel from New York and from the DPRK Ministry of Post and Telecommunications in Pyongyang in the use of email and the Internet. In February 1996, he reported that the DPRK had reversed their decision to send these officials, and that even officials from the Mission could not be trained after all, at least not for some months.

On May 10, 1996, the Institute was visited without notice by US Customs special agents concerned about transfer of strategic technology. Nautilus staff offered them cups of tea and cookies, and

provided them with copies of export licenses for 386 computers and correspondence and phone numbers of relevant officials in Washington DC. At this time, we also discovered that two North Koreans had applied for visas to visit Nautilus for training in Febuary 1996. This enquiry had triggered the Customs investigation, but also revealed how close the DPRK came to sending its technicians for training in the United States before reversing their decision.

Over the subsequent months, we negotiated with the Treasury and State Departments and obtained a license and approval to provide training and a computer/modem for the DPRK Mission in New York. However, the same agencies also denied such export licenses and training to DPRK counterparts from the DPRK, to be provided at a separate event in Canada in August 1996, even though this same counterpart had received an earlier approval via this Institute for a computer transfer in 1994. State Department officials attributed this to low level export control bureaucracy running scared, but there was nothing we could do about it at the time. By this time, we had secured a separate ruling from the US Treasury Department that it was legal to use the Internet to communicate with North Koreans if they had the hardware, software, and connectivity. [find date]

On October 2-6, 1996, we trained two North Korean officials from the UN Mission at the Nautilus Institute in Berkeley. The schedule and outline of this training is provided in an attachment to this report. This training was followed by interaction with DPRK officials, including instruction concerning the use of his email account in New York, which was partly successful in achieving on-going connectivity.

On November 29-30, 1997, during the visit to the United States of the first DPRK delegation on windpower, NAPSNet provided a two day training on the Internet. This training included introduction to the Internet; using email; using the WWW; hands-on training; and use of these tools in the context of renewable energy activities with a special lecture provided by an expert from the Center for Renewable Energy and Sustainable Technology. In 1999, with yet another export license, Nautilus Institute provided another obsolete desk-top PC to the DPRK UN Mission to facilitate email communication and North Korean use of the World Wide Web. This step enabled us to stop forward-faxing the Daily Report via the good offices of the Korea Society in New York, a process which had been going on for nearly two years.

Perhaps the most effective means of reaching the DPRK, however, has been through the representatives of the intergovernmental aid organizations stationed in Pyongyang. Currently, NAPSNet boasts 11 recipients in the DPRK, including representatives of the Red Cross, World Food Program, and UNDP, as well as a few foreign embassies such as Vietnam. Through these intermediaries, the Daily Report is circulated among DPRK officials. In sum, by 1999 a number of DPRK official and non-governmental channels were receiving NAPSNet information services via email and the World Wide Web.

NAPSNet Papers, Special Reports, Policy Forum Essays

We noted above that NAPSNet set out in 1993-94 to fill an intellectual void as well as to provide a convenient and unique way to stay abreast of the news concerning the DPRK and nuclear proliferation in this region. To do so-while exploiting the network effects associated with the Internet-NAPSNet staff either produced analysis based on our own knowledge, or commissioned single or multiple authors on critical issues. As will be evident, we initially were highly pro-active in this endeavor and attempted to generate analysis that was ahead of the policy-making curve but in areas where we believed policy makers were headed. Sometimes (as in the energy field) this direction was not even perceived to be important (or was viewed as premature) by policy makers.

By early 1995, the network built a critical mass such that readers began to contribute their own

analyses of their own volition. Unsurprisingly, these contributed analyses were often reactive to current developments and in that sense were less ahead-of-the-curve of policy-making. But they reflected the role that NAPSNet was starting to play in generating a stock of consensual knowledge and analysis that was shared across political boundaries and reached all the way to Pyongyang (where these reports and essays were read avidly). This development stimulated us to create a Policy Forum On-Line, initially with limited success in terms of attracting self-contributed (as against solicited) essays. In the last year, however, the Policy Forum On-Line has also become dynamic with a number of analysts-including contributors close to governments in the United States, South Korea, and North Korea-sending analysis for publication with ensuing debates from NAPSNet readers.

Over the six years since the first publication was issued (June 1993), NAPSNet averaged about 2 analyses per month, although the rate has accelerated in recent years to five or six per month. These analyses were supplemented with other publications issued over the Internet. Five distinct waves of analysis can be discerned over this period.

1993-4: DPRK-nuclear analysis: a set of commissioned experts from a diverse set of authors (with respect to political views and country origin) were distributed. Of particular note was the attention accorded to that by Alexander Mansourov, a young Russian analyst on nuclear decision-making in the DPRK. Robert Scalapino had noted his work and referred NAPSNet to Mansourov who then commissioned him to write this analysis. Although now controversial among DPRK scholars, the piece was the first publicly available in the west to analyze the internal processes of decision-making in the DPRK and was circulated widely in Washington, including within the National Security Council, where the notion that there are politics at all in Pyongyang was simply incredible.

1997--Armistice and Great Power Talks: A set of commissioned experts from a diverse set of countries and political views produced papers on the legal and political aspects of great power talks on the ending of the Armistice. NAPSNet was stimulated to undertake this work by feedback from analysts in Pyongyang, Washington and Seoul. Of particular importance was the paper by former US State Department (and already retired) legal counsel Patrick Norton; and the North Korean writer Pak Chol Gu in Pyongang and pro-North Korean writer based in Tokyo, Kim Myong Chol. Norton's piece was published in advance of the public announcement of the four-power talks and resulted in substantial media coverage of his views in the United States. The piece was also read closely in Pyongyang. The essay by Kim Myong Chol was read closely in Washington as he is perceived to be closely aligned with the DPRK Government; and that by Pak Chol Gu as he is aligned with senior party figure Kim Yong Sun. This marked the first occasion that NAPSNet published North Korean views.

1996-99-Environmental Security: On trips to Pyongyang in 1991-93, Hayes had worked with DPRK counterparts to transfer environmental literature. One counterpart-the Korean Anti-Nuclear Peace Committee-added working on environmental issues to its charter. To test the hypothesis that regional environmental dialogue might offer an opportunity to engage the DPRK in "functional" low politics on environmental concerns-as recommended in our earlier research for the official Northeast Asian Regional Environmental Programme under UNDP/ESCAP auspices for a regional meeting in Beijing in 1994 and in the NAPSNet paper in 1994 by Mark Valencia-Nautilus Institute launched the Energy-Security-Environment in Northeast Asia (ESENA project). Although the ESENA project was not conducted under NAPSNet auspices *per se*, the American and Japanese partners in this three year project between 1996-99 attempted on two or three occasions to enable the DPRK to send participants in meetings held on acid rain, marine pollution and clean coal technology in the United States or Japan, and failed. They also arranged for materials and an informal invitation to be sent to Pyongyang to attend an informal but quasi-official meeting on acid rain monitoring in Japan in 1998, but again the DPRK declined to participate (citing internal factors). In short, the hypothesis that sub-

regional environmental issues could induce DPRK participation proved incorrect. Hayes and Von Hippel also produced two internal working papers on environmental issues in the DPRK, but so far, neither have been distributed over the Internet.

1995-1999-Energy and the DPRK: As noted earlier, Nautilus work on DPRK energy began in early 1995, and resulted in a series of unpublished but widely circulated technical reports starting in 1996. This material was distributed over NAPSNet only twice. The first addressed the contentious issue of the proposed storage of nuclear waste from Taiwan in the DPRK. The initial paper and subsequent analysis was tracked closely by DPRK and ROK officials who both circulated it in defense of their respective positions at the United Nations in New York and various quasi-official publications.

The second was the publication of the summary version of the full-length study produced the year before, and produced at the behest of the Washington-insider Institute of International Economics.

The Institute's internal modeling work was also used at this time to commence planning (as of late 1996) with DPRK counterparts in NAPSNet to identify a suitable energy technology for non-governmental cooperation. It led directly to the Unhari Village Windpower Project referred to below in the context of media coverage between1997-99.

1978-79: Nuclear Policy Project: Like the ESENA project described earlier, the Nuclear Policy Project was not conducted under NAPSNet auspices. However, the intellectual work in this project on the future of nuclear weapons and related issues in the region, with particular reference to China and Japan, bears closely on the nuclear proliferation issue arising from the DPRK challenge. This work also builds on the earlier analysis of nuclear weapons in the region in the first burst of analysis published by NAPSNet in 1994 as well as the earlier, pre-Internet work of the Institute on nuclear weapons in the region. It is also noteworthy that NAPSNet spawned two pilot networks on related issues, the Non Nuclear NATO Network in 1998 that issues a weekly *NATO Nuclear Flash* (see http://www.nautilus.org/nnnnet/index.html); and the South Asia Peace and Security Network (see http://www.nautilus.org/sand/index.html) that is to commence publication by end of 1999. These two publications allow the issues addressed by NAPSNet to be interwoven with similar issues arising in two other regions beset by nuclear weapons policy problems.

As can be seen in Figure 2, the most common topic addressed by NAPSNet analyses was either nuclear issues related to the DPRK, or the DPRK itself. Only in 1996 were these issues not addressed in NAPSNet published analysis. In Attachment 1, we analyzed the diversity of representation of analysts contributing to NAPSNet (leaving out NAPSNet staff). In the first three years, high levels of diversity were associated with efforts to ensure representativeness initiated by NAPSNet staff who commissioned these papers. These reflected the work outlined in the previous section on DPRK nuclear issues in 1994, and on the Armistice in 1997. In 1998, however, the diversity is self-generated by contributors who elected to contribute to the network, and moderate diversity is sustained in the subsequent two years up to the present. The implication for network-building is that diversity is a value that must be sought explicitly, and entails significant expenditure of effort and resources to achieve.

FIGURE 2: NAPSNet Analytical Papers Distribution

We would not argue that this analysis made any specific marginal difference in policy-making or outcomes. Rather, we suggest that the wide dissemination of the material and the reiteration of certain themes contributed to a richer information milieu and helped to sustain

Shifts in User Distribution

Early figures from the start-up period1994-96 to show who received the *Daily Report* have not been compiled yet. In February 1996, a broad break-out showed that scholars-largely in universities and think-tanks in the United States and South Korea-accounted for 70 percent of registered NAPSNet participants; government officials and media accounted for 18 and 12 percent respectively.

Table 2 shows the user distribution in late 1997 and then two years later, in December 1999 in the most important eight countries (accounting for about 75-80 percent of total users in all countries) where NAPSNet services were provided. In 1997, "government" (defined as government officials including the military) accounted for 16 percent-down slightly from a year earlier-but rose back to 19 percent two years later, that is, today.

Table 2: NAPSNet Daily Report recipients data (all countries)

1997-9	# in 1997	% in 1997	# in 1999	% in 1999	inc of #	% change
Activist	11	2%	14	1%	127%	**-1%**
Attorney	5	1%	6	0%	120%	**0%**
Business	6	1%	11	1%	183%	**0%**
Consultant	15	3%	28	2%	187%	**0%**
Funder	19	3%	15	1%	79%	**-2%**
Government/IGO	72	13%	182	14%	253%	**2%**
Military	17	3%	60	5%	353%	**2%**
NGO	26	5%	88	7%	338%	**2%**
Researcher	7	1%	20	2%	286%	**0%**
Scholar	289	50%	390	30%	135%	**-20%**
Student	51	9%	106	8%	208%	**-1%**
Journalists	29	5%	115	9%	397%	**4%**
Other	26	5%	257	20%	988%	**15%**
	573	**100%**	**1292**	**100%**	**225%**	

 Note: this distribution is calculated only for the six major receiving countries that amount to 75
 % of recipients in 1997, and 78 % of recipients in 1999. In 1997, registered recipients of the
 Daily Report totaled 784 in 27 countries; in December 1999 this total is 1957.

This trend reflects the upward shift of younger officials in various bureaucracies, plus the "wiring" of intergovernmental organizations (such as KEDO and the United Nations

agencies active in New York and the region). It occurred a time when NAPSNet had no personal representation in Washington DC, as in the 1994-96 period, suggesting that growth in government use is not dependent on personal networking in Washington *per se*. [check Young In Park and Steve Noerper dates]

Many low and medium ranking officials use NAPSNet as a source of independent analysis to cross-check what they are reading in official channels. As one State Department official explained recently:

I am particularly interested in the 23 myths [see Attachment 4] because I find that the knowledge that I gain as an American diplomat overseas about the "real situation," is often trumped in Washington by the myths and misconceptions held by Congress, the White House, and political

appointees. I need to be aware of the myths in order to better frame counter-arguments or to explain why the "ground truth" is different from the conventional wisdom.

A good example of that occurred recently when a US intelligence analyst mentioned to Nautilus staff that the KCNA had referred to local electricity markets. He was able to provide an independent report from the DPRK that such markets had been created, based on a report from the DPRK Rural Energy Delegation presentation at a workshop on rural energy in the DPRK held in Berkeley in May 1999. These reports contrasted with other reports concerning the alleged suppression of food markets in DPRK cities circulating at about the same time in the press-also the subject of phone calls to the Nautilus office from American intelligence analysts and on which we could cast little light. Interestingly, neither of these analysts has easy access to email although both of their offices receive the *Daily Report*-again demonstrating the interest in data and analysis rather than news per se in government circles.

In this way, the information resource embodied by NAPSNet staff and networked participants offers a way to test the Uranus principle of scientific investigation whereby planets are deduced to exist by virtue of observable but indirect indicators. Perhaps the most rigid image in the dominant paradigm of the DPRK is that it cannot and is not changing. Thus, any "hard" data that indicates that change is indeed occurring, albeit invisibly, is of immense value to the analyst and policy-maker alike.

In some countries, NAPSNet offered one of the few channels whereby up-to-date news and views of known veracity were available to government officials and scholars. In China, for example, the Daily Report was available both by email and via the Web-for those with Web access. One reader (now a working journalist) wrote:

When I was a student at the Hopkins-Nanjing Center in Nanjing, China, the NAPSNET website was one of the few foreign news websites I could read through the center's two Internet-accessible terminals in the library...Several of the foreign students used firewall breachers like Anonymizer to access banned sites such as The Economist, TIME and CNN. The NAPSNET site was not a banned site and thus was useful in its breadth and depth of research as well as its ready accessibility.

Scholars and students-mostly university rather than think-tank based [check with Tim on this] -fell over the same period from 59 percent to 38 percent. The early dominance of university-based scholars reflected the origins of the Internet in universities, plus the early disinterest in government in external, non-governmental "open source" information over the Internet. Also noteworthy is the fact that the number of scholars and student users still grew by 135 and 208 percent over the same period, in spite of the fall in the fraction of total users accounted for by this segment of users. Media users remain a small fraction of total users. The difference between the February 1996 media users of 12 percent (absolutely, 72) and the December 1997 fraction of 5 percent (absolute number, 29) is not explicable at this point. However, by December 1999, the media users had increased to 9 percent of overall users, and the absolute number had increased to 115. The list of media users in itself is quite impressive (see Attachment 3) and will be analyzed further below given the crucial "intermediary role" of journalists in relation to US foreign policy decision-making. (See Table 3)

Web Dissemination

A decision was made to create a Nautilus web page in December 1994, and was implemented in early 1995. However, systematic publication of the Daily Report on the World Wide Web did not occur until January 1997. [check: this is what 1997 Reader Survey says]

In late 1997, after about a year on the Web, the NAPSNet Reader Survey reported that about 60 visits per weekday occurred. Web tracking software shows that less than half of these visits were

frequent "repeat" visits, suggesting that some 100-200 individuals visit the "latest" report regularly while some unknown additional number visit the site occasionally.

Thus, the community of those relying upon WWW access to the Daily Report had become significant in less than a year, although still a small minority of the overall (and growing) NAPSNet community.

Table 3: 1999 NAPSNet User Distribution by Country**(Big 7 plus DPRK only)**

	Austr.	Canada	Japan	PRC	DPRK	ROK	UK	USA	Total
Activist			1				2	11	**14**
Attorney								6	**6**
Business						3	1	7	**11**
Consultant		1		1			1	25	**28**
Funder		1				1		13	**15**
Government/IGO	7	15	5	9	11	23	2	110	**182**
Military						3	1	56	**60**
NGO		2	2	3		11	3	67	**88**
Researcher		1	2			8	1	8	**20**
Scholar	26	24	30	16		42	20	232	**390**
Student	7	4	3	1		20	2	69	**106**
Journalists		1	23	5		22	5	59	**115**
Other	8	13	10	17		32	2	175	**257**
Total	48	61	77	52	11	165	40	838	**1292**

Note: in the DPRK, nine international UN and food agencies staffed by DPRK nationals, and 2 Embassies in Pyongyang receive the electronic Daily Report as of 1999.Total distribution of the Daily Report as of Dec 5/99 is 1957

By late 1999, these web usage rates had increased only slightly. The Nautilus web tracker shows that archived reports have averaged 41daily hits and the "latest Daily Report" page averaged 88 daily hits. The rate of web hits appears to climb rapidly during periods of high tension (as after the DPRK missile test).

Due to reader preference and judgement that the Web remains expensive and unreliable in many countries, NAPSNet distributes the *Daily Report* and *Special Reports* by email each day, as well as by posting on the Web page. This "two tier" system ensures that those with high-speed access-primarily in OECD countries-can exploit fully the resources offered, while ensuring that users in low-speed countries like China can still get the basic service. Thus, summaries or short papers are distributed by the email service, and hyperlinks are now provided to the full-length texts at the Web page.

For this reason, the Web page usage may be dampened by the instant gratification provided to email readers each day who are thereby enabled to avoid the mental energy and the financial and time cost of logging onto the Web to get the Daily Report. Relatedly, the total "electronic communications" from the NAPSNet service is measured not by Web usage-the common metric used by many organizations-but by email services plus Web usage. On this basis, email service is vastly greater than Web service-perhaps as much as 97 percent greater in terms of readership.

Total Readership and Saturation Levels

Overall, in December 1999, we estimate that total daily readership of the *Daily Report* is about 7,828 (assuming the same internal "forwarding" occurs in 1999 as was reported on average by the 1997 *Reader Survey*). Although the scope of issues covered by NAPSNet has grown over the 1996-99 period to include security issues far afield from the DPRK and nuclear proliferation threats (most recently, to the implications of the East Timor crisis for regional security, see[http://www.nautilus.org/napsnet/sr/East_Timor/index.html),](http://www.nautilus.org/napsnet/sr/East_Timor/index.html)) the topic is still relatively arcane and specialized compared with issues of such as environmental degradation, lifestyle, personal identity, e-commerce, etc. that drive the growth of the Internet.

Another way to examine the performance of NAPSNet is to see if the "policy market" is saturated by current distribution levels. One indicator of saturation is the service provided to important and policy-salient institutions in each country involved in the issues raised by the DPRK and nuclear proliferation/security concerns in Northeast Asia.

A review of the institutional distribution of NAPSNet services (see Attachment 2) shows that NAPSNet is far from achieving full institutional coverage. Simply continuing with the current growth rate implies three doublings over three years to nearly 17,500 registered users and as many as 70,000 daily readers. To date, readership has been largely self-propagating, based on word-of-mouth and irregular marketing at conferences and events. A targeted promotion effort aimed at hyperlinking the NAPSNet web site to the user bulletin boards and web pages on the one hand, and outreach to the total set of institutional consumers on the other, could easily surpass this projected growth.

The total populations of interested individuals in relevant institutions in the seven or eight major countries of the East Asian "security zone" likely would not be much larger than the projected NAPSNet readership based on growth to such registration levels. Thus, we anticipate that the self-propagating growth rates will diminish over the coming two-three years; but that more effective promotion could offset this effect to maintain absolute growth rates as high as 50-100 percent per year.

III. INFORMATION AND US POLICY-MAKING

One of the key impacts of the enormous increase in information available via the Internet to make policy choices is the corresponding increase in the necessity for and power of filters and gatekeepers of information. These "gatekeepers"(news services, publications, etc.) are sought after by policymakers and other professionals to decrease the amount of "informational noise/garbage" and increase marginal benefit of each byte of information.

As is well-known, the US Government relies heavily on its own information systems in developing policies and making decisions. For external information, it relies on established non-governmental media-especially the major wire services and newspapers "of record"-the New York Times and the

Washington Post in particular. A second major set of intermediaries is the dense thickets of research institutes and think-tanks inside the Beltway, and the phalanxes of corporate Beltway Bandits working on contract.

To play in the Internet arena from the outside of the policy process, an information service (and attending organization) must have a track record of impeccable credibility and respect. If they achieve this reputation with the two primary sets of intermediaries and are known to have access in the Government itself, then the outsider information supplier must have unique data and knowledge, and be able to serve the information needs of multiple constituencies simultaneously at low marginal cost.

Once so position, organizations supplying such respected services obtain new-found access and wield considerable power and influence. Conversely, the least sign of bias, carelessness, outright errors, or extraneous information will quickly drive users away from the service.

As an early entrant into the Internet's political space, NAPSNet quickly became an essential source of information for a significant fraction of the decision-making community working the DPRK "problem." For many on the outside, it became a "sole source" supplier of up-to-date information and a low cost, almost instantaneous way to stay abreast of news and views in relevant countries. For many on the inside, it has become an important way to cross-check the validity and soundness of official information flows that feed into the decision-making mill.

Media As Intermediaries

In section II, we argued that NAPSNet supplied new "hard" information into the think-tank discussions about the DPRK, and innovative analysis that was circulated widely in think tank circles. The NAPSNet analytical product thereby suffused the think-tank information milieu in Washington in the 1993-95 period. Other, for-profit analysts also became avid consumers-SAIC, for example, being a heavy user of the *Daily Report*. SAIC analysts were not loath to call to ask for specific information or analysis to help them complete contract work for various US Government agencies on policy options to deal with the DPRK.

In this section, we will focus primarily on the media. With significant exceptions, almost no American journalists have visited the DPRK. Lee Sigal has argued that the American media are *normally* highly beholden to the US Government as suppliers of fifty percent or more the news. In the case of the DPRK, the dependence on US Government sources was likely closer to 95 percent. Denied a beat in the DPRK whereby an investigative journalist might come up with independent sources, the American media played two critically important roles in American decision-making on the DPRK "problem."

The first was to simply recycle myths about the DPRK from the Cold War that constitute the core of the old paradigms of the personnel directing the state, thereby ensuring that the media did not become a channel for anomalous data or innovative analysis. (Thus, only in *oped* pages and then rarely did one find new analysis that transcended the old paradigms). The second was to hold up a mirror of "public opinion" to decision-makers-in effect, reflecting back to them their own prejudices masquerading as "news."

In 1993, Peter Hayes listed no less than 23 "myths" about the DPRK or US policy toward the DPRK that could be found in the American media (see Attachment 4). Perhaps the most egregious example was the constant recycling of the "collapsist" thesis in the media. This myth runs to the effect that North Korea will collapse soon ("implode"), or its variant, that North Korea soon will collapse economically. This mantra was repeated *ad nauseum* as if simply chanting it could bring about the

prediction.

This assumption expressed and reinforced the conservative sentiment in the Republican majority elected in December of 1994 and make it much harder for those in the US Government committed to implementing the Agreed Framework to do so. The framing image was that the United States gained the nuclear freeze and had bought time until the DPRK collapsed. Thus, there was almost no public discourse about what was required for the United States to fulfil its implicit commitments under the Agreed Framework.. Not until Bill Perry delivered his policy review to the President in 1999 was this assumption explicitly put aside as a basis for American policy.

As Hayes noted at the time, "The combination of these predominant myths with the ignorance of reporters about North Korea ensures that the American media primarily frame public opinion rather than inform it."

In the years since the October 1994 Agreed Framework, the content of the news has shifted somewhat as floods and famines erupted in the DPRK and evoked incremental shifts in American policy. Once Galluci left the US Government, the implementation of the Agreed Framework descended back to the operational levels in various agencies who continued business-as-usual from the past as if nothing much had changed. Thus, the US Government fragmented the Agreed Framework into different elements which were implemented separately and without overarching coordination, with each implementing agency using its own *SOPs* and *ROTs*.

For the most part, the original myths proved adequately flexible to the task of framing the DPRK as a problem primarily, as Lee Sigal put it, of "crime and punishment." In the case of famine and food in the DPRK, for example, the framing image was either sentimental--starving North Koreans get American helping hand; or cynical-the DPRK using starving women, children and old people as a weapon to wrest more assistance from the international community. No-where in the news was the "real story" evident: the political economy of food aid in the grain surplus American mid-west exported with tax subsidies; the retrogressive role played by American private food aid delivery organizations in suppressing nascent agricultural markets in the DPRK with free food and their disinterest in and even distaste for the reconstruction and development of rural North Korea; the introduction of potentially catastrophic vegetarian viruses in food aid shipped to the DPRK; and the role played by food aid as a substitute for fulfilling US commitments made under the Agreed Framework that were politically unpalatable.

In the case of KEDO, the media framed the issue as the cost and security risks associated with the light water reactor transfer to the DPRK. In this case, conservative elements opposed to the transfer of light water reactors to the DPRK under the Agreed Framework leaked the fact that the US Nuclear Regulatory Commission had "denied" KEDO a license to export a reactor to the DPRK. In fact, a KEDO contractor had fallen into a booby trap by applying for an unneeded export license for nuclear technology before the DPRK had negotiated a US-DPRK nuclear cooperation agreement prefigured in the Agreed Framework and required by American law. The media then presented KEDO as an example of capitulation and appeasement of the DPRK on a scale unmatched since the Munich Agreement with Hitler. In reality, nothing of the sort was going on. In fact, the United States, not the DPRK, was dangerously close to reneging not just on the spirit but on the letter of the Agreed Framework due to its inability to deliver heavy fuel oil on time.

Almost no media covered the real stories associated with KEDO-the difficulties of building and sustaining the coalition between the United States, the ROK, and Japan, to implement KEDO's mission; the collapsing DPRK energy economy and the importance-or insignificance of-America--supplied heavy fuel oil; the disintegration of the DPRK electric grid and the resultant impossibility of safely operating a light water reactor in the DPRK. Moreover, as an institution itself consumed

with short-term imperatives, for the most part KEDO ignored these issues-a situation, one might think, ripe for media exposure.

A third example was the media framing of the DPRK rocket fired over Japan in October [check date] 1998 into the Pacific Ocean. This firing was presented in endless articles, opeds, and editorials as posing a near-and-present danger to Americans in the continental United States of a nuclear tipped DPRK ICBM. Specialists who have paid close attention to the DPRK missile program over the years concluded that the firing was motivated largely by the need to enhance the domestic stature of Kim Jong Il, secondarily by the opportunity to poke Japan in the eye-always popular with Koreans, north or south; and lastly, by an attempt to gain marginal negotiating leverage at the pending talks in Berlin with the United States.

In reality, the missile failed, proving yet again that systems engineering for multi-stage rockets is extremely challenging for a small, technically backwards state like the DPRK, and thereby demonstrating incontrovertibly that the DPRK did not pose a direct threat to the United States. The test also alienated greatly China, the DPRK's primary supplier of food and refined oil essential to keep the Kim Jong Il regime in power. Instead of reporting on all these aspects of the DPRK rocketry, the media beat up enabled Republicans to go on the offensive against the Agreed Framework and for the deployment in East Asia of theater missile defenses.

NAPSNet and the American Media

A major function of NAPSNet is to summarize and transmit this kind of coverage by the American media to readers around the world. However, NAPSNet also covers news and views as expressed in the ROK, Japan, China, and Russia (and less often, in the DPRK itself, see below). This coverage often diverges greatly from the general thrust of the American media. The *Daily Report* served as a daily reminder to readers that the relationship between the media and decision-making in Washington on a complex problem like the DPRK is incestuous and mostly serves notice of battles between different policy currents contending for a decision outcome. Indeed, it is possible to read silences as well as high volume coverage-the *lack* of the ubiquitous leak often means that a deal has been cut and the clamps have been tightened, whereas a flow of leaks often means that a proponent or opponent of a policy option is making a power play by feeding a line to a journalist in the midst of a battle for control over policy decisions.

Thus, few leaks to the media are observed during the July-October 1994 period of negotiations between Bob Galluci and the North Koreans. This relative silence revealed more about the understandings reached between Galluci and then-US Defense Secretary William Perry than it did about the actual views of American analysts and decision-makers in various agencies who were merely lying low.

In addition to keeping the network of readers well-informed about the content of the American media, NAPSNet also used the *Daily Report* listserv as a vehicle for communicating specialist analysis and views, including those of Nautilus staff or affiliates. Over time, journalists came to recognize that NAPSNet offered them a convenient digest of reputable sources and analysis, and increasingly called or emailed direct to NAPSNet staff asking for interviews or guidance.

A good example is the *New York Times* bureau in Tokyo. In the early years, no New York Times journalists received the Daily Report in Tokyo (unlike the Washington Post who were much earlier on email). At the time that David Sanger was reporting on the DPRK, he relied primarily on a combination of phone calls back to US intelligence agency contacts with South Korean wire stories as raw material for his stories. ROK news media are notoriously susceptible to manipulation by the ROK Government, and are much more footloose with factual information and ethical guidelines than

western media. Yet Sanger made no attempt to contact the north Korean analysts and writers resident in Tokyo who could have served as de facto spokesmen for the inaccessible DPRK state, or at least offered alternative views on North Korean motivations and actions. Nor apparently did he contact the Japanese experts on North Korea affiliated with Japanese intelligence agencies or universities. As one review suggests, his reporting often substituted misinformation, misinterpretation, ambiguous attribution, and his own shorthand but biased framing for news reporting. Consequently, many of his seventy odd stories on the DPRK written in 1994 were unpredictable and inconsistent.

Today, the situation is very different. A number of American media organizations, including the New York Times but also the Wall St. Journal, Newsweek, Washington Post, and others, receive the Daily Report in the regional offices in Tokyo or Beijing. Journalists often call the Institute to ask for insight or interviews, and sometimes conduct interviews by email (given the time difference). Journalists have attempted to offset their lack of access by finding specialists able to supply first-hand information on "deep background" issues such as the environmental degradation of the DPRK as it affects food production and military readiness (*Newsweek* story) or the subterranean and undeclared incremental shifts to nascent markets in the DPRK (*Wall St. Journal*).

NAPSNet also provides materials to television and radio news journalists. Again, on the politically influential All Things Considered on National Public Radio and other outlets, interviews with staff have offered alternative views on the news about the DPRK.

In the big picture, however, we argue that the "routine" impact on journalists of this coverage of issues using NAPSNet staff as commentators is minimal, if for no other reason that the column inches and play time are so tiny compared with the ability of global media machines to grind out wire stories, provincial reprinting, and their own papers.

Instead, the impact of NAPSNet via the media-intermedaries to the policy decision-makers in Washington came via a more indirect and subtle set of interactions. In Section I, we argued that NAPSNet gained a rapidly growing readership because it combined the convenience of a uniquely cross-cultural and timely news service with intellectual content in the form of unique "ground-truthed" data about the DPRK and innovative analysis.

NAPSNet also served as a vehicle whereby cooperative non-governmental engagement by the Nautilus Institute could be announced to this network, and to the world at large. The Unhari Village Windpower Project implemented jointly by Nautilus Institute and DPRK counterparts was so innovative and anomalous that once alerted by the Daily Report that the project existed, they sought it out as a news story in its own right. We argue that a mere press announcement would not have achieved this effect-indeed, the traditional press release circulated at the completion of the project evoked almost no response. But over time, as the persistent coverage by NAPSNet of the project at the end of the second Nautilus technical mission to the DPRK in October 1998 reinforced the initial coverage of the first mission the previous May-with on-line photo galleries, trip reports, and published analysis in prestigious journals-so media interest in the project grew. In almost all cases, the journalists involved had heard of the project first from NAPSNet coverage.

This interest--which extended to Japan and South Korea as well as American mainstream media--culminated in coverage in three key media outlets in 1999. The first was a short documentary on CNN in [find date], 1999. In this case, the communication was almost completely electronic except for a few voice phone calls concerning shipment of video tapes. However, due to CNN's tiny market share, very few people saw the item.

The second was a nearly full-page essay in the *San Francisco Chronicle* including cover photos. The

journalist conducted in-depth interviews, read background material, and addressed the interrelationships between energy shortages, famine, and social stability in the DPRK. He had become aware of the project from another journalist at the paper who had run a tiny piece not long before on it-which he in turn learned about by reading NAPSNet.

The third, and most important, was the twelve minute interview conducted by the *News Hour*'s Elizabeth Farnsworth. Both Farnsworth and her support staff read widely, fact checked their own script and our claims, and delved deeply into the issues. Twelve minutes on *News Hour* is a long interview by any standard. The appearance on *News Hour* legitimated the work-and its policy implications-inside Washington and made it much easier to explain to insiders who had seen it in the course of their work (or home-work). The tangible demonstration that it is possible to conduct business in a professional way was the most important single message of this coverage-a conclusion directly contrary to the coverage by journalists such as David Sanger who consistently portrayed its leadership as crazed Stalinists.

This coverage-none of which was sought directly by Nautilus-flowed from NAPSNet's reach as a vehicle of the images, facts, and analysis that we chose to deliver via email and the Web. It made many insiders more inclined to listen to our briefings, and even to seek out more information from the Institute on the DPRK. Thus, in recent months we have entertained a train of low ranking US officials in search of hard information on the DPRK for their respective agencies as they figure out their role and mission in the Perry initiative.

Where the substance and the coverage converged in policy decisions was not in the intermediaries, whether think-tanks or media. Rather, we would argue, it had its real impact in the mind of a supreme generalist and (in Steinbrunian parlance) uncommitted thinker in the person of William Perry.

Based on our careful tracking of the House Republicans in mid-1998, it became apparent to us that Perry would play a decisive role in the direction taken by the United States and the DPRK. He would either lead the two sides toward enhanced cooperation in a recast Agreed Framework; or the two sides would head back to the roller coaster standoff and confrontation that were the hallmarks of the 1992-94 period.

Thus, using a simple lesson known to email users-that executives often read their own email-Hayes looked up Perry's email address on the Stanford home page directory, and emailed a lengthy trip report on the missions to Unhari in December 1998. In January 1999, the report from the briefings to Perry by non-governmental organizations in Washington noted that:

that he was impressed by the detailed description of the windmill project of Nautilus, and it was clear that he appreciates flesh and blood information at the micro level on what it is really like to live, to conduct business, and to carry out negotiations, etc. inside North Korea, rather than grand policy recommendations.

On January 6, Hayes wrote a memorandum addressed to Perry and conveyed via an intermediary in the donor community. On April 5, Hayes accompanied by Bob Scalapino gave Perry a personal briefing at Stanford University on the DPRK in general, and Unhari in particular.

These materials and the briefing made a deep impression on Perry. At his talk at the World Affairs Council in early November, he mentioned talking with non-governmental organizations during his review of US policy toward the DPRK. He stated: "Particularly one group over here in Berkeley, the Nautilus Institute. I can tell you, they're really doing the lord's work over there." We surmise that Perry paid attention to this information and analysis was because it was technical in nature, based

on engineering experience, physical calculations and measurement, including sociological surveys to international standards as well as voltage meters. It was also extraordinarily well documented (very detailed trip reports and debriefings, twelve hours of video tape, 600 slides, hundreds of photos). Perry, being the supreme technocrat, spoke this language and was aware that the laws of physics don't obey Kim Jong Il. One example will suffice. Our Fluke multimeters registered wild frequency and voltage fluctuations on the DPRK grid and demonstrated thereby that there are now two grids in the DPRK on different frequencies. This is an enormously significant strategic (and economic) fact.

Although our experiential slice was very narrow, it was also very deep and incontrovertible evidence of what was happening at one spot in the DPRK on-the-ground. We expect that Perry paid similar attention to reports from the other Americans on-the-ground in the DPRK, the joint MIA recovery teams. Like low ranking but influential intelligence analysts of DPRK in the bowels of the Pentagon and the State Department before him, these reports meant that he had obtained independent, incontestable data that were inexplicable in the traditional paradigms that framed the issues posed by the DPRK. Already a cautious man, we made him even more cautious, because we demonstrated how ignorant Americans are of what is going on in the DPRK on the ground.

Perry had no deep and powerful exposure to the issue prior to his appointment as Secretary of Defense, and his period of office put him in an alliance with the diplomat Bob Galluci who impressed Perry with the difficulties of negotiating the DPRK into an acceptable standoff in the form of the Agreed Framework. He also approached the problem as a "theoretical" thinker due to his co-authorship of *Preventive Defense* with Ashton Carter wherein he argues that high level personal diplomacy can result in conflict avoidance or resolution at lower cost and risk than military force. However, he was to learn quickly that this model did not work in DPRK-at least so far-as the DPRK political culture does not allow for Track 1 1/2 dialogues of the kind Perry used to create the Partnership for Peace between Russia's military and NATO (at least before the Kosovo war).

Returning to Steinbruner's analysis of policy decisions on complex decisions under conditions of structural uncertainty, we note that by the time Perry had begun work on his policy review, the cybernetic state had nearly driven over the cliff in May-June 1994-a near miss war averted by his own account almost by serendipity and due to President Carter's unplanned trip to Pyongyang and willingness to do the unthinkable-embrace Kim Il Sung in full view of CNN's cameras; and after wrestling the North Koreans to the ground in the Agreed Framework, had spent five years in which nothing had been done to shift from the basic stance all along-militant containment of the DPRK using military tools of deterrence and defense-to cooperative engagement using a wide array of political and economic tools. As he began work, the intelligence community remained divided over the DPRK's intentions and capabilities to weaponize its plutonium. The ability of the American teams at Yongbyon and the joint MIA recovery teams to gather much human intelligence on the DPRK was limited by the highly controlled movements of these personnel (and the apparent lack of overarching guidance as to what if anything they should be looking for).

The only official sources of "hard" information were orthodox long distance sigint, comint, elint, and photint collection systems, but usually these generate ambiguous signatures of nefarious activities in the DPRK and abroad. These indicators were supplemented with the record of intergovernmental negotiations which could be cross-referenced with traditional reading of tea leaves (that is, decoding the latest ravings from KCNA and interpreting the rank hierarchy of leadership from published photographs, that kind of thing)-not much to go on. The only independent source of information about the situation in the DPRK available to Perry was from the private voluntary organizations delivering food aid in the DPRK; and the few non-governmental organizations on-the-ground-like Nautilus Institute.

In short, the strategy of persistent communication in volumes of new data and analysis, the constant

pointing to anomalous data that underscored inconsistency of the dominant paradigm, and the careful positioning of this information using legitimated channels that could vouchsafe for its reliability and intentions, were all crucial to incrementally shifting the "information milieu" in which policy is made toward the DPRK to a more realistic basis.

We emphasize that we do not believe that Perry has moved much beyond the narrow focus on military-military cooperative engagement enunciated in his work before becoming Secretary of Defense, or in the publications of the Preventive Defense project since he left office. Perry has not undergone a cognitive conversion to a new paradigm. Indeed, since delivering his report, he has emphasized that it is possible that the situation will revert to full-scale confrontation. Like Galluci before him, he proved to be an uncommitted thinker comfortable in a strong theoretical framework of strategic analysis forged in the Cold War. But he put first priority on achieving agreement on a purely military issue-ballistic missiles-rather than addressing directly the political issues of such import to the North Koreans. This narrow "iconic" discourse in which both sides speak the same language (missiles) may stabilize the situation briefly, but is far too little to satisfy the North Koreans for long. Meanwhile, the machinery of cybernetic policy making looks ready to resume business-as-usual now that Perry has retreated from front stage. Thus, it remains to be seen whether the new millenium will open a new era in US-DPRK relations, or will revert to old patterns.

IV. CONCLUSION: LEARNING ABOUT NORTH KOREA

Cooperative engagement is cheap relative to alternative means of influencing the DPRK's decisions. Non-governmental cooperation is unique in that it offers insight into DPRK intentions that cannot be obtained by alternative means, especially in the short timelines in which these organizations can deliver results.

The shift to cooperative engagement requires not only that non-military policy tools be employed to change the motivations of the leaders in proliferating states like the DPRK, but that the military prepare to be engaged cooperatively with the proliferant state to support this new policy. For the military-and intelligence agencies-this shift in the task from "simple" deterrence to complicated cooperation means that counterforce options themselves may have to be reviewed and revamped to accord with cooperative goals-at the very least, these tools should not subvert the cooperative agenda. Thus, exercises to increase readiness may have to be postponed, reduced in scale, "virtualized," or create opportunities for observation by the adversary. At best, the military-military contacts in many dimensions can support cooperative engagement, as has begun in the case of the MIA Joint Recovery Teams in the DPRK.

But a full-blown cooperative engagement strategy involves far more than mere military-military interactions. The shift to a multi-dimensional strategy of political, economic, cultural, and military cooperative engagement of proliferating states imposes a new challenge on American decision-makers to use all sources of information-governmental and non-governmental-to inform the new strategy. It also demands a new level of coordination and tradeoffs between the various tools of coercive diplomacy revolving around disincentives of various kinds versus cooperative engagement which rests on shared benefits.

At the informational level, this shift requires new mechanisms to ensure that the US agencies still committed to the "old agenda" of military deterrence and defense have access to the rapidly expanding galaxy of new information and policy opportunities emerging from the agents implementing cooperative engagement. To the extent that the new agents are multilateral and official (such as KEDO), this coordination and information sharing may not be so difficult-although

the task should not be under-estimated. But to the extent that the new players are either truly international such as the UN specialized agencies, or bilateral (such as food aid non-governmental organizations) or multilateral (such as the IFRC), the "old agencies" run the risk of not even being aware that a new constellation of knowledge exists on what is to them on the "dark side of the moon." It will take a great deal of explicit effort to connect these two worlds, and to ensure that US policy options are not grossly biased toward militarized standard-operating-procedures and rules-o--thumb inherited form the Cold War past and guiding the state still set largely on auto-pilot.

In sum, non-governmental organizations can update the psychic map of North Korea born in the Cold War, replacing stereotypes with real information. They can align key players in each capital, and provide communications channels between them. And they can build personal relationships and trust to bridge the gap between the centralized, personalistic, and politicized decision-making system in Pyongyang, and the decentralized, legalistic, and bureaucratic political culture in Washington. In short, they can act as "translators" at key junctures.

The new information technology can assist non-governmental organizations to achieve these outcomes at an affordable cost and, by exploiting network effects and the new "porosity" of state agencies, by transforming the information milieu in which decisions are made and creating new, consensual knowledge that supplants the old, retrogressive paradigms. This strategy rests not on speed or on technology per se. Rather, it rests on intellectual contribution combined with the reach and potency of the new technology.

Non-governmental organizations may not have the capacity to propel the ship of state. But they can help navigate and sound warnings to change course to safer waters. Even a change of a few degrees can be the difference between a successful voyage and running disastrously aground on the reefs of a complex problem in international politics.

Lessons Learned--Implications for Future Networking

The experience reviewed above provides some important lessons learned about the future of networking.

The first lesson is that it is possible to reconstitute an information milieu provided sufficient resources and stamina are combined with superior intellectual firepower.

The second lesson is that untapped networking potential remains in NAPSNet. Data about interests, common background, and ideas for collaborative research and motivation to participate were collected from registrants. But NAPSNet staff never had the resources to systematically extract and analyze these attributes of network participants. Consequently, an opportunity for skilful networking and collaborative work that could have generated a much higher degree of consensual knowledge was lost.

The third is that the barriers of distance and political borders can indeed be circumvented by the new technology. How important this fact becomes depends on the skill with which the network exploits the connectivity. But the multiple, redundant, and low or zero marginal cost of communication allows non-governmental organizations to coordinate and collaborate with a large number of individuals and organizations at one time. The average analytical productivity of NAPSNet vastly exceeds that of the average well-endowed university department on relatively tiny resources. Prior to the Internet, it was simply neither feasible nor affordable to create an information service like the *Daily Report* that enables innovative analysis and unique data to be provided to policy makers.

However, for technical reasons (as well as financial constraints) we have reached the limits on small-scale non-governmental information power. To achieve the next leap in productivity and impact, two software technologies are critical elements of effective coalition-building and communication strategies on urgent global public policy issues such as the reduction of nuclear dangers. These are: a) modular mass customized email software that enables much higher and targeted levels of information service to very large numbers of people (10-100,000 + readers); and relatedly, web and email networking analysis and service software.

Footnotes

NOTE: This is a working draft. Footnote citations will be added later.

1 J. Steinbruner, The Cybernetic Theory of Decision, New Dimensions of Political Analysis, Princeton University Press, New Jersey, 1974, pp. 16-18. Steinbruner does not limit the applicability of this theory to the American state, but many political, cultural, and institutional dimensions requisite to his theory limit its applicability beyond the American example.

2 Steinbruner, op cit, p. 109.

3 Steinbruner, op cit, p. 55.

4 Steinbruner, op cit, p. 55.

5 Steinbruner, op cit, p. 66.

6 Steinbruner, op cit, p. 67.

7 Steinbruner, op cit, p. 69.

8 Steinbruner, op cit, p. 74. This model is basically the same as "Model II" in Graham Allison's well-known Essence of Decision, Little Brown and Co, Boston, 1971.

9 Steinbruner, op cit, p. 79.

10 Steinbruner, op cit, p. 89.

11 Steinbruner, op cit, pp. 92, 97.

12 Steinbruner, op cit, p. 110.

13 P. Joseph, reference.

14 Steinbruner, op cit, p. 113.

15 Steinbruner, op cit, p. 330.

16 See P. Hayes, Pacific Powderkeg, American Nuclear Dilemmas in Korea, Lexington Books, Lexington Massachusetts, 1990, published by Hanul Press in Seoul in 1989 (Korean); Proliferation Potential in Korea, Working Paper, Peace Research Centre, Australian National University, Canberra, 1990; "South Korean Nuclear Trade," paper to UCLA Center for International and Strategic Affairs Conference on Emerging Nuclear Suppliers and Nonproliferation, Bellagio, Italy, August l987, published as "Korea" in W. Potter, ed, International Nuclear Trade and Non Proliferation, The Challenge of the Emerging Suppliers, Lexington Books, 1990, pp. 293-329; "Hall of Mirrors, American Nuclear Deterrence in Korea," in Centre for Peace and Conflict Studies, Beyond

Deterrence, University of Sydney, 1989, pp. 45-58; "American Nuclear Hegemony in the Pacific," Journal of Peace Research, volume 25, no 4, December 1988, p. 351; "Extended Nuclear Deterrence in Korea: Some Problems," in proceedings, U.S.-Korean Security Studies Council, Conference, Bloomington Indiana, December l986. This work on Korea had its roots in P. Hayes, W. Bello and L. Zarsky, American Lake, Nuclear Peril in the Pacific, Viking/Penguin l987 (Also published in Australia, New Zealand, Canada, UK, Manila, Seoul, Tokyo (in Japanese).

17 P. Hayes, North Korea's Nuclear Capabilities and Intentions, Trip Report To North And South Korea, October 1991.

18 P. Hayes, "Kim's Elusive Bomb," Far Eastern Economic Review, November 7, 1991, pp. 10-11; also in Sisa Journal (Seoul), November, 1991; and P. Hayes, "Moving Target, Korea's Nuclear Proliferation Potential," paper to Asian Pacific Peace Research Conference, Christchurch, February 1992; also available as working paper from Department of International Relations, ANU, 1992; also in Sekai magazine, Tokyo; and in Korean Journal of International Studies, April 1992.

19 The report to UNDP was entitled: , UNDP Greenhouse Gas Inventory and Least Cost Reduction Study, UNDP reports for Mongolia and North and South Korea, Berkeley, November 1992.

20 T. Graham, "North Korean Initiative: Urgent," memorandum to Peter Goldmark, Rockefeller Foundation, April 6, 1993.

21 P. Hayes, Report on Trip to Pyongyang, May 8-11, 1993, Nautilus Institute, attached to P. Hayes, letter to T. Graham, May 18, 1993.

22 The Sisa article as entitled: At The Nuclear Crossroads In Northeast Asia; the briefings were given at the National War College; the Institute for Foreign Affairs and National Security; and the Research Institute for National Unification in Seoul.

23 P. Hayes, fax to T. Graham, June 9, 1993.

24 P. Hayes, fax to T. Graham, June 14, 1993.

25 P. Hayes, fax to T. Graham, July 22, 1993.

26 T. Graham, "North Korean Nuclear Network," Rockefeller Foundation memorandum to P. Hayes, July 21, 1993.

27 P. Hayes, fax to T. Graham, August 24, 1993.

28 P. Hayes, fax to T. Graham, September 8, 1993.

29 P. Hayes, "Northeast Asia Security Network-NASN," Nautilus Institute memorandum to T. Graham, August 30, 1994.

30 P. Hayes, fax to T. Graham, July 23, 1993.

31 T. Graham, "November Trip to DPRK," memorandum to Peter Hayes, Rockefeller Foundation, September 9, 1993.

32 T. Graham, "North Korea, Background for the Board," memorandum to Peter Goldmark, Rockefeller Foundation, December 7, 1993.

33 P. Hayes wrote a report to UNDP/GEF on various environmental projects for the DPRK entitled:

Report on Global Environment Facility Mission to the Democratic Peoples' Republic of Korea, Nautilus Institute, November 1993.

34 P. Hayes, "Brief Summary of Discussions on Nuclear Issues with Kim Yong Sun," October 16, 1993, p. 3. Add note

35 Rockefeller Foundation, "Rockefeller Foundation Grants Focusing On North Korea," no date. In this early period, further NAPSNet grants from Rockefeller were made on December 22, 1993; April 25, 1994; and May 5, 1995. These grants, combined with the funds from W. Alton Jones Foundation on DPRK energy and security issues, and the general support or project-specific grants from Ploughshares Fund, Winston Foundation, Merck Fund, MacArthur Foundation, and Prospect Hill Foundation, enabled Nautilus Institute to operate NAPSNet and related information services over the years.

36 Author, Cooperation On Energy Sector Issues With The DPRK, report to Asia Society, October 29/93; Cooperation On Environmental Issues With The DPRK, report to Asia Society, October 29/93; Cooperation On International Economic Issues With The DPRK, report to Asia Society, November 2/93; The Transfer Of LWR Technology To The DPRK, report to Asia Society, November 1/93.

37 P. Hayes, Should the United States Supply LWR Technology to the DPRK? paper to Carnegie Endowment for International Peace symposium, "United States and North Korea: What Next?" Washington DC, November 1993.

38 Spector later testified in favor of the transfer at the US Congress. This testimony was published in P. Hayes and Young Whan Kihl, Peace and Security in Northeast Asia, the Nuclear Issue, M.E. Sharpe, Armonk, New York, 1997.

39 As this machine was obsolete already, it had to be assembled from parts. It was not finally transferred to Pyongyang until October 1994 in Bangkok due to the cancellation of Peter Hayes' May 1994 trip to Pyongyang for UNDP at the height of the reactor defueling crisis in the DPRK. In 1998, we determined that the computer had operated for some time, but had been damaged and made inoperative by voltage surges in the DPRK.

40 P. Hayes, "What North Korea Wants," The Bulletin of the Atomic Scientists, volume 49, no. 10, December 1993, pp. 8-10; on-line at: http://www.bullatomsci.org/issues/1993/d93/d93Hayes.html

41 P. Hayes, "North Korea's Nuclear Gambits," in K. Bailey, edited, Director's Series on Proliferation, Lawrence Livermore Laboratory, UCRL-LR-114070-2, September 7, 1993.

42 P. Fomby, email to Peter Hayes, December 8, 1999; check hard copy or zipped archives of DR for start-up date.

43 P. Hayes, Design For Confidence Building Between The DPRK And The ROK Based On UNDP Technical Cooperation, Report to the UNDP, March 25, 1994.

44 See Korea Times, "UN Ready To Help Improve S-N Ties: Boutros-Ghali," United Nations, p.1, February 10, 1995; on-line at: ftp://ftp.nautilus.org/napsnet/daily_reports/1995/02-95_--_Feb/FEB10

45 See P. Hayes, "Defiance Versus Compliance, North Korea's Calculus Faced With Multilateral Sanctions", in G. Stillman and T. Inoguchi, Northeast Asian Regional Security, The Role of International Institutions, edited by Takashi Inoguchi and Grant B. Stillman, UN University Press, Tokyo, 1994. (and available on-line at: http://www.nautilus.org/pub/ftp/napsnet/oldpaps/sanction2).

46 It has never been clear why this took place. On the one hand, Hayes had just written an article in Sisa Journal in Seoul headlined "Tactically Smart, Strategically Stupid" on the DPRK's confrontation with the IAEA; on the other hand, he was also told by UN staff that the DPRK Ministry of Foreign Affairs officials had confused him with his namesake, Mark Hayes (another Australian) working on the Tumen River UN project, with whom they were upset. After consulting with the State Department, Hayes elected to come back from Beijing to the United States rather than attempt to proceed to Pyongyang as encouraged by the UN.

47 Kim Yong Sun, Chairman, Supreme People's Assembly Reunification Policy Committee, letter to Peter Hayes, June 11, 1994.

48 P. Hayes, letter to Sasakawa Peace Foundation, September 6, 1994.

49 P. Hayes, "Materials for the Next Round," Nautilus Institute memorandum to Joel Wit, Gary Saymore, Political-Military Bureau, State Department, July 17, 1994. The memo is dated 1995, but the content and fax dating indicate that this dating was in error and actually occurred in July 1994.

50 P. Hayes, "Non Nuclear Energy Collaboration and Expert Level Talks Before the Next Round," Nautilus Institute memorandum to David Brown, Korea Desk, State Department, August 19, 1994. This technical analysis concluded that: "The handwritten calculation attached to this memo shows...that the fuel requested as oil by the DPRK would suffice to operate about 209 MWe of generating capacity. As this fuel is meant to displace the energy output of about 200 MWe plus 50 MWe plus 5 MWe = 225 MWe of nuclear generating capacity, their request is credible at the time that all the nuclear plant is on-line."

51 D. Von Hippel and P. Hayes, KEDO and HFO Demand in the DPRK, Nautilus Institute report to KEDO, December 14, 1996.

52 S. Greenhouse, "One US Aviator Was Killed In North Korea Helicopter Crash", New York Times, December 19, 1994, p. A8.

53 D. Brown, "Hello Incident," fax to Peter Hayes, December 19, 1994.

54 P. Hayes, "Comment," NORTHEAST ASIA PEACE AND SECURITY NETWORK DAILY REPORT,

December 19, 1994: on-line at: ftp://ftp.nautilus.org/napsnet/daily_reports/1994/12-94_--_Dec/DEC19

55 D. Von Hippel and P. Hayes, The Prospects for Energy Efficiency Improvements in the Democratic People's Republic of Korea: Evaluating and Exploring the Options, Nautilus Institute report. 1995; D. Von Hippel and P. Hayes, "KEDO and HFO Demand in the DPRK", Nautilus Institute report, December 14, 1996; D. Von Hippel and P. Hayes, "The Prospects for Energy Efficiency Improvements in the Democratic People's Republic of Korea: Evaluating and Exploring the Options," Nautilus Institute 1996 report, published in Korean Journal of Defense Analysis, November 1997; D. Von Hippel and P. Hayes, "An Estimate Of Energy Use In The Armed Forces Of The Democratic People's Republic Of Korea," Nautilus Institute report, published in The Economics of Korean Reunification, vol. 2, no. 3-4, Fall-Winter, 1997, pp. 56-79; D. Von Hippel and P. Hayes, Demand for and Supply of Electricity and other Fuels in the Democratic People's Republic of Korea (DPRK): Results and Ramifications for 1990 through 2005. Prepared for the Northeast Asia Economic Forum/East-West Center, October 1997; D. Von Hippel and P. Hayes, Ecological Crisis and the Quality of Life in the Democratic People's Republic of Korea (DPRK), prepared for the Conference: "Unraveling Regime Dynamics in North Korea: Contending Perspectives and Comparative Implications", The Institute for Korean Unification Studies, Yonsei University, Seoul, Republic of

Korea, August 20, 1997; P. Hayes and D. Von Hippel, Comparative Approach to Regional Cooperation for a Clean, Efficient Electric Power Industry, prepared for the Conference: "Comparative Approaches to Cooperative Development of Power Systems for Northeast Asia", organized by the Northeast Asia Economic Forum, Ulaan Baatar, Mongolia, August 18 - 20, 1997; D. Von Hippel and P. Hayes, "Engaging North Korea on Energy Efficiency". The Korean Journal of Defense Analysis, Volume VIII, No. 2, Winter 1996. Pages 177 - 221; D. Von Hippel and P. Hayes, "North Korean Energy Sector: Current Status and Scenarios for 2000 and 2005". Chapter 6 in Economic Integration of the Korean Peninsula, Institute for International Economics Special Report 10, M. Noland, editor, available on-line at:
http://www.nautilus.org/pub/ftp/napsnet/special%5Freports/dprk%5Fenergy%5Fsector.txt

56 P. Hayes, fax to D. Brown, Korea Desk, State Department, March 15, 1995.

57 The Russian DPRK Reports are found on-line at:
http://www.nautilus.org/library/security/napsdprk.html Monterey Institute of International Studies (Monterey, California, USA) and the Center for Contemporary International Problems (ICIP) (Moscow, Russia).

58 Steve Freedkin, webweaver at Nautilus Institute at this time, played an important role in creating an operable web page for NAPSNet users.

59 From Nautilus Institute, funding request to W. Alton Jones Foundation, Northeast Asian/Korean Nuclear Free Zone Project , 1994 Funding Request, March 1994.

60 This data is from a note prepared by D. Fisher, "The Northeast Asian Peace and Security Network," dated December 2, 1994. The table from the data is drawn about distribution is dated September 1994.

61 P. Hayes, D. Fisher, NAPSNet Mid-Term Review, January 1995, p. 6.

62 Ibid, p. 4.

63 Ibid, p. 4.

64 From Nautilus Institute, funding request to Rockefeller Foundation, Report To Rockefeller Foundation Northeast Asian Peace And Security Network 1995 Grant, November 10, 1995.

65 NAPSNet, Directory of Participants, Berkeley, Fall 1995, p. 2.

66 See NAPSNet Membership Survey and Status Summary Report, Appendix A: Breakdown of Survey Respondents, at: http://www.nautilus.org/napsnet/survey97/Appendix_A.html

67 This arrangement did not contravene US sanctions as the digital forwarding device in the Australian cellular phone simply passed the call onto Pyongyang, and the American telephone system did not register that the call had been connected. As no-one was billed, no funds were expended to benefit any North Korean entity.

68 P. Hayes, letter to Lauchlin O'Farrell, IPPNW, July 26, 1994.

69 Nautilus Institute, Report To RBF on DPRK Internet Grant, October 1995, November 5, 1998.

70 Legally, no export controls are needed to supply an export-controlled computer to a UN Mission in the United States as such offices are not diplomatic territory, and therefore, no export is involved

in such a transfer. However, US regulations also ban any transfer (wherever located) that benefits North Koreans, and therefore, the Commerce Department ruled that such transfer require export licensing.

71 These papers were funded out of the initial Rockefeller grants to NAPSNet, supplemented by general purpose grants from Ploughshares, Merck Fund, and W. Alton Jones Foundation.

72 A. Mansourov, North Korean Decision-Making Processes Regarding the Nuclear Issue, NAPSNet paper, May 1994, on-line at: http://www.nautilus.org/pub/ftp/napsnet/papers/mansourov0594.txt

73 This work was funded by the Prospect Hill Foundation.

74 P. Norton, Ending The Korean Armistice Agreement: The Legal Issues, NAPSNet Policy Forum On-Line #2, March, 1997, on-line at:
http://www.nautilus.org/fora/security/2a_armisticelegal_norton.html

75 Kim Myong Chol, DPRK Perspectives On Ending The Korean Armistice, Replacement of the Korean Armistice Agreement, and Pak Chol Gu Prerequisite to a Lasting Peace in the Korean

Peninsula, both in NAPSNet Policy Forum On-Line #4, May 4, 1997, on-line at:
http://www.nautilus.org/fora/security/4a%5Fdprkonka.html

76 As we wished to pay Kim for his services as we had other commissioned authors in this series, we were required to file for permission to do so from the US Treasury Department on the advice of State Department. The Treasury Department in turn ruled that Kim Myong Chol, a stateless second generation Korean living in Japan and travelling on a Japanese Ministry of Interior re-entry permit was in fact a "North Korean national." But having so ruled, Treasury then declared him to be an "unblocked national" of the DPRK, thereby enabling him to do business with the United States and to be paid for his services.

77 See L. Zarsky, P. Hayes, Environmental Cooperation in Northeast Asia, report to UNDP/ESCAP, Beijing September 1994; and "Environmental Issues and Regimes in Northeast Asia," Journal of International Environmental Affairs, volume 6, 1995, pp. 283 et passim, also on-line at:
http://www.nautilus.org/pub/ftp/napsnet/papers/hayes1093.txt

78 M. Valencia, Involving the DPRK in Northeast Asia Regional, Economic, and Environmental Cooperation, NAPSNet paper, January 1994, on-line at:
ftp://ftp.nautilus.org/napsnet/papers/valencia0194.txt

79 This three project was funded by the US Japan Foundation and Center for Global Partnership. For on-line information about the project, see: http://www.nautilus.org/esena/index.html The thirty odd expert essays published by this project over three years are not included in the quantitative analysis of NAPSNet publications although, as noted above, they were relevant to the issue of NAPSNet and the DPRK.

80 P. Hayes, Enduring Legacies: Economic Dimensions Of Restoring North Korea's Environment prepared for the Fourth Annual International Symposium on the North Korean Economy, Center for North Korean Economic Studies, Korean Development Institute and Korea Economic Daily, Seoul

October 18, 1994.; and D. Von Hippel and P. Hayes, Ecological Crisis and the Quality of Life in the Democratic People's Republic of Korea (DPRK). Prepared for the Conference: "Unraveling Regime Dynamics in North Korea: Contending Perspectives and Comparative Implications", The Institute for Korean Unification Studies, Yonsei University, Seoul, Republic of Korea, August 20, 1997. (check:

may be on ESENA site).

81 This work was funded initially by UNDP in 1992-3; then by W. Alton Jones Foundation; then by Compton Foundation, Greenville Foundation, Institute on Global Conflict and Cooperation at UC San Diego, and Rockefeller Foundation.

82 P. Hayes, Debating the DPRK-Taiwan Nuclear Waste Deal, NAPSNet PFO #97-05, March 21, 1997, on-line at: http://www.nautilus.org/fora/security/3a_nukewastedeal.html

83 D.Von Hippel and P. Hayes, "DPRK Energy Sector," NAPSNet Policy Forum On-Line, March 3, 1998, on-line at:
http://www.nautilus.org/pub/ftp/napsnet/special%5Freports/dprk%5Fenergy%5Fsector.txt

84 Thus, the extensive publications of this project are not included in the NAPSNet publication analysis in this paper unless noted. This project was funded by the Ford Foundation. See: http://www.nautilus.org/nukepolicy/index.html

85 See D. Lockwood, The Status of US, Russian, and Chinese Nuclear Forces in Northeast Asia; G. Segal, Nuclear Forces in Northeast Asia, etc. Find dates, urls.

86 Hard copies of registration forms exist for this period, however, and could be analyzed.

87 NAPSNet, "NAPSNet Member Profiles," internal memorandum, February 1996:

88 Frederic Maerkle, email to Peter Hayes, December 3, 1999.

89 From Ri Soong Pil, Construction of Medium Hydroelectric Plants for Comprehensive Development of Local Economies, from No. 3 of the Economic Study, 1999, a quarterly magazine published in the DPRK. Text available on The People's Korea web site at: http://www.korea-np.co.jp/pk/

90 DPRK Delegation, Presentation to DPRK Rural Energy Workshop, DPRK Rural Energy Workshop,

UC Berkeley, California, 19-20 April 1999

91 Respondent to 1997 NAPSNet Reader Survey. [check source with TS]

92 See NAPSNet Membership Survey and Status Summary Report at: http://www.nautilus.org/napsnet/survey97/Membership_Survey_Report.html#item12

93 This estimate is based on the earlier estimate of 6,656 daily readers of the Daily Report and average of two Special Reports per month, versus about 200 readers of the Web page version of these services. Email communications amount to about 160,000 communications per month; web usage to about 4,400 "hits" per month.

94 In one case (Chinese Foreign Ministry), one recipient reported passing it onto 121 colleagues!

95 The early exceptions were Sig Harrison for the check: NYT? WP?; and Nicholas Kristoff for the New York Times in 1991 [check date]. Kristoff's articles had a lot to do with North Korean refusal to let more American journalists enter the DPRK.

96 L. Sigal, Reporters and Officials, The Organization and Politics of Newsmaking, D.C. Heath, Lexington, Massachusetts, 1973, p. 123.

97 Reference Perry on deal with NK as it is, not as we would like it to be.

98 P. Hayes, North Korea Through An American Prism: A List Of Myths Currently Recycled Through The Media, Presentation at the University of Kentucky, December 19, 1993.

99 L. Sigal, Disarming Strangers, Nuclear Diplomacy with North Korea, Princeton University Press, New Jersey, 1998, p. 207.

100 A. Kaplan, "From Misunderstood Conflict to Quiet Resolution: David Sanger's 1994 Reporting on North Korea's Nuclear Crisis," paper in Graduate Seminar "Covering Asia" seminar at the Graduate School of Journalism at University of California at Berkeley, December 6, 1999.

101 As one Beijing-based journalist emailed November 4, 1999: "I hope you can help with something. For the first time I'm turning my attention to North Korea, and maybe I shouldn't be surprised --but I am -- to find a number of education programs that educate North Korean bankers and economists in the ways of capitalism. I'm curious about this, and I wonder if I can give you a ring sometime soon to ask you some

questions. Is there a good time and place to call?"

102 See the on-line coverage at: http://www.nautilus.org/dprkrenew/index.html; see also J. Williams et al,

"The wind farm in the cabbage patch," Bulletin of the Atomic Scientists, 55, 4, May/June 1999, on line at: http://www.bullatomsci.org/issues/1999/mj99/mj99williams.html

103 P. Hayes, email to William Perry, December 4, 1998.

104 J. Bishop, Interaction Working Group, North Korean Working Group Meeting January 12, 1999, email, January 20, 1999.

105 From radio broadcast on KQED, get date.

106 W. Perry and A. Carter, Preventive Defense, A New Security Strategy for America, Brookings Institution, Washington DC, 1999.

107 Carter's call from Pyongyang that called off the crisis ended a briefing by Perry and his team to President Clinton recommending actions with serious military consequences ranging all the way up to full-scale war. W. Perry and A. Carter, Preventive Defense, Brookings Institution, Washington DC, 1998, p. Carter's trip was funded by the Rockefeller Foundation and was preceded and followed by advice to Carter from a select group of non-governmental specialists on the DPRK, including from the Nautilus Institute.

108 This leaves aside the possibility of obtaining insight from the Russian, Chinese and other third parties-especially personnel of intergovernmental agencies with dealings in or with the DPRK. Except for limited sharing about the nature of the DPRK polity and its nuclear capabilities, however, these agencies have failed to tap these rich information resources about a diverse range of issues affecting the DPRK's strategic dilemmas and therefore its leadership's motivation; and such detailed information was therefore not available to Perry or anyone else (such as Winston Lord when he was head of State) via official channels.

109 See Perry's chapter in J.E. Nolan, ed., Global Engagement: Cooperation and Security in the 21st Century, The Brookings Institution: Washington, D.C., 1994; the Project on Preventive Defense is on-

line at: http://www.stanford.edu/group/CISAC/test/research/preventive.html

View this online at: https://nautilus.org/global-problem-solving/the-impact-of-the-northeas-
-asian-peace-and-security-network-in-us-dprk-conflict-resolution-2/